



NTIS/PS-77/1163

**Plastics Used as Building or Construction  
Materials. Volume 1. 1970 - 1974**

Citations from the Engineering Index Data Base

Search period covered

1970 - 1974

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 ABSTRACT: THE CITATIONS COVER THE MATERIALS PERFORMANCE, DESIGN

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16. Abstracts

The citations cover the materials performance, design strength, structural design, and fire and weather resistance of plastics used in construction. Applications include roofing materials, concrete additives, laminates, plumbing fixtures, and molding fixtures. (Contains 367 abstracts)

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ENGINEERING INDEX DATA BASE

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ID NO.-EI740205806

405806

COAL GASIFICATION FOR ELECTRIC POWER GENERATION.

LEMEZIS, SYLVESTER; ARCHER, DAVID H.

WESTINGHOUSE ELECTR CORP, LESTER, PA

DESCRIPTORS-\*COAL, POWER GENERATION, FUELS,

CARD ALERT - 522, 524, 6L5

CODEN-COMBAF SOURCE- COMBUSTION V 45 N 5 NOV L973 P 6-12

THIS NEW MULTIPLE FLUIDIZED-BED CONCEPT HAS THE POTENTIAL FOR OVERCOMING THE INHERENT LIMITATIONS OF OTHER GASIFICATION PROCESSES AND PROVIDING AN ECONOMIC GASIFICATION SYSTEM FOR POWER PLANTS. A WIDE VARIATION IN FUELS INCLUDING CAKING COALS AND HIGH-ASH COALS CAN BE USED WITHOUT COSTLY AND INEFFICIENT PRETREATMENT. THIS FLEXIBILITY WILL ALLOW POWER PLANTS TO UTILIZE LOCAL COAL RESOURCES AND MINIMIZE TRANSPORTATION COSTS. WHEN SCALE-UP PROCEDURES HAVE BEEN VERIFIED, A COMMERCIAL-SIZE GASIFIER PLANT WILL BE CONSTRUCTED. 2 REFS.

Abstract

Keywords

Journal Title

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ID NO.- EI741279848 479848

HIGH FILLER CONTENT UREA-FORMALDEHYDE COMPOSITIONS FOR AGRICULTURAL BUILDING.

Mironov, O. G.; Putlyaev, I. E.; Katsyuba, V. I.; Likholetov, O. D.

Sov Plast n 11 1973 p 18-19 CODEN: SOPLAW

DESCRIPTORS: (\*PLASTICS, REINFORCED, \*Agricultural Applications), (BUILDING MATERIALS, Plastics), (PLASTICS, Fillers), UREA, FORMALDEHYDE

CARD ALERT: 415, 804, 817, 821

High filler content composites based on UKS urea-formaldehyde resin are found to be useful in flooring, partitions and load-bearing elements in agricultural buildings where corrosive action is involved.  
3 refs.

ID NO.- EI741279837 479837

FIRE RETARDANT LAMINATED PLASTIC.

Lindamood, William L.

Constr Specifier v 27 n 10 Oct 1974 p 55-56, 59 CODEN: COSPAJ

DESCRIPTORS: (\*PLASTICS LAMINATES, \*Flame Resistance), (BUILDING MATERIALS, Fire Resistance),

IDENTIFIERS: FIRE RETARDATION

CARD ALERT: 816, 817, 914

A discussion of decorative laminated plastic, including standards and requirements, and problems brought out by laboratory reports.



ID NO.- EI741275860 475860

POLYMER CONCRETE: A CHEMICALLY INERT STRUCTURAL MATERIAL.

Baker, C. A.

Humes Ltd, Melbourne, Aust

Inst Eng, Aust, Civ Eng Trans v CE 16 n 1 1974 p 12-16 CODEN:  
CVETBB

DESCRIPTORS: \*CONCRETE, (CONCRETE CONSTRUCTION, Plastics  
Applications), BUILDING MATERIALS, CONCRETE AGGREGATES,

IDENTIFIERS: POLYMER CONCRETE

CARD ALERT: 405, 412, 817

This paper presents a study of the physical and chemical properties of an ultra low binder content polymer concrete, particularly in relation to its usage for underground pipe. The development of the material is described, in particular the means adopted to ensure complete chemical inertness and to overcome loss of strength caused by bond failure in an aqueous environment. 15 refs.

ID NO.- EI741169180 469180

OB ODNOM PREDSTAVLENII URAVNENII DVIZHENIYA VYAZKO-UPRUGIKH SRED.  
\$left bracket\$ One Representation of the Equations of Motion of  
Viscoelastic Media \$right bracket\$ .

Filippov, I. G.

Izv Akad Nauk (SSSR) Mekh Tverd Tela n 6 Nov-Dec 1973 p 79-86  
CODEN: IZMTB9

DESCRIPTORS: \*ELASTICITY, (BUILDING MATERIALS, Plastics), (PLASTICS,  
Structural Applications),

CARD ALERT: 931, 817, 415, 421

A new method of solving dynamic problems for viscoelastic media, based on the introduction of potential functions and transformation of the equations of motion of viscoelastic media, is proposed. These equations are reduced to three mutually unrelated equations in movable or fixed coordinates, permitting in some cases a general solution to be obtained without any dependence on the type of the viscoelastic operators. Application of this method to problems involving the use of plastics and polymers in structures and their elements, subjected to dynamic load effect, is mentioned. In Russian.

ID NO.- EI741168579 468579

STUDY OF PARTIALLY IMPREGNATED POLYMERIZED CONCRETE SPECIMENS.

Sopler, Birger; Fiorato, Anthony E.; Lenschow, Rolf

Norw Inst of Technol, Trondheim

Polym in Concr, Symp, Pap, Am Concr Inst, 1972 Fall Conv, Hollywood, Fla, and 1973 Spring Conv, Atlantic City, NJ p 149-171. Available from ACI (Publ SP-40), Detroit, Mich, 1973

DESCRIPTORS: (\*CONCRETE CONSTRUCTION, \*Plastics Applications), (BUILDING MATERIALS, Testing), (CEMENT, Additives), POLYMERIZATION,

IDENTIFIERS: POLYMER IMPREGNATED CONCRETE, METHYL METHACRYLATE

CARD ALERT: 405, 412, 421, 815, 817

An experimental program to study the preparation and properties of partially impregnated polymerized concrete specimens is described. Preparation consisted of the impregnation of hardened and dried concrete with methyl methacrylate monomer followed by polymerization. Combining the sealing and polymerization stages of production by polymerizing the specimens in warm water gave uniform results. The stress-strain curve for the partially-impregnated polymerized specimens was linear up to from 70 to 75% of failure. No significant shrinkage or creep was measured on polymer-impregnated specimens or on corresponding dried and sealed concrete control specimens. The limiting sustained load capacity for polymer-impregnated concrete prisms was between 70 and 75% of their ultimate short-term strength. 10 refs.

## PROPERTIES AND APPLICATIONS OF POLYMER IMPREGNATED CEMENTITIOUS MATERIALS.

Tazawa, Eiichi; Kobayashi, Sadao

Taisei Corp, Tokyo, Jpn

Polym in Concr, Symp, Pap, Am Concr Inst, 1972 Fall Conv, Hollywood, Fla, and 1973 Spring Conv, Atlantic City, NJ p 57-92. Available from ACI (Publ SP-40), Detroit, Mich, 1973

DESCRIPTORS: (\*CONCRETE CONSTRUCTION, \*Plastics Applications), (CEMENT, Additives), (BUILDING MATERIALS, Mechanical Properties), COMPOSITE MATERIALS,

IDENTIFIERS: POLYMER IMPREGNATED CONCRETE, PROCESSING TECHNIQUES

CARD ALERT: 405, 412, 415, 421, 817

Basic problems related to the manufacturing of polymer impregnated cement (PIC) are discussed. Experimental studies on drying impregnation and polymerization are presented. In addition to these conditions of the treatment, mix proportion of the base material should be carefully selected so as to optimize a property aimed at. Mechanical strength of PIC is influenced by self stress generated in the material possibly due to shrinkage caused by polymerization and the difference in thermal coefficients of expansion of polymer and concrete. Annealing and addition of a plasticizer are useful methods in reducing this self stress. Improvement of strength if analyzed by Griffith theory, and uniformity of PIC is evaluated by Weibull's theory. Both of these analyses indicate that the impregnation is a reasonable method to improve mechanical properties of cementitious material, though shrinkage caused by this treatment should be deliberately taken into account when the material is further reinforced with steel or fibers. Products manufactured by the process studied in this report have shown good performances in actual service to date. 17 refs.

ID NO.- EI741168575 468575

DEVELOPMENT OF POLYMER-IMPREGNATED CONCRETE AS A CONSTRUCTION MATERIAL FOR ENGINEERING PROJECTS.

De Puy, Glenn William; Dikeou, James T.

Bur of Reclam Eng and Res Cent, Denver, Colo

Polym in Concr, Symp, Pap, Am Concr Inst, 1972 Fall Conv, Hollywood, Fla, and 1973 Spring Conv, Atlantic City, NJ p 33-56. Available from ACI (Publ SP-40), Detroit, Mich, 1973

DESCRIPTORS: (\*CONCRETE CONSTRUCTION, \*Plastics Applications), (CEMENT, Additives), BUILDING MATERIALS, COMPOSITE MATERIALS,

IDENTIFIERS: POLYMER IMPREGNATED CONCRETE

CAPD ALERT: 405, 412, 415, 817

This is a report on a study carried out as a part of a long-range research program undertaken by several agencies in order to develop new and improved materials of construction. The described study of polymer-impregnated concrete (PIC) has shown that a material of greatly improved properties, as compared with conventional concrete, can be routinely produced. Typical structural properties at ambient and elevated temperatures are presented and results of durability tests are reviewed. The program has advanced from the stage of determining the basic characteristics and engineering properties of PIC to the gathering of statistically significant data for preliminary design purposes. Tests have shown that good quality PIC can be produced from precast concrete of widely varying quality and composition, and cured by different methods although some differences in the resultant properties can be expected due to porosity, composition of mix, curing conditions, and other factors affecting concrete properties. The main factor in producing high quality PIC is achieving a high degree of impregnation and complete polymerization. Potential applications currently under study for PIC include saline water distillation plants, precast tunnel liners and supports, concrete pipe, bridge decks, wall panels and beams, and marine structures. Field tests are in progress for polymer-impregnated draintile and sewer pipe and are being planned for precast PIC tunnel liners. Extensive experimental data are tabulated and plotted in curves. 4 refs.

ID NO.- EI741168097 468097

ERFAHRUNGEN MIT FASSADENBEKLEIDUNGEN AUS ERHOEHT SCHLAGZAEHEM PVC.  
\$left bracket\$ Experience with Facade PVC Linings with Elevated Impact  
Strength \$right bracket\$ .

Morianz, E.

Hoechst, Frankfurt AM, Ger

Ind-Anz v 96 n 62 Jul 26 1974 p 1411-1415 CODEN: IANZAQ

DESCRIPTORS: (\*BUILDINGS, \*Facings), (BUILDING MATERIALS, Plastics),  
POLYVINYL CHLORIDE,

CARD ALERT: 402, 817

The PVC types suitable for linings of external walls of buildings  
and, in particular, for ready-made facade elements, are reviewed.  
Several examples are presented which illustrate the applicability of  
such facade elements and the prerequisites for their use. In German.

ID NO.- EI741168088 468088

BRANDSCHUTZTECHNISCHE MINIMALANFORDERUNGEN BEI DER VERWENDUNG VON  
KUNSTSTOFFEN IM BAU. \$left bracket\$ Minimum Fireproof Requirements  
in the Use of Plastics in Building Applications \$right bracket\$ .

Hoffman, R.

Brandverhuetungsdienst fuer Ind und Gewerbe, Zurich, Switz

Kunstst-Plast v 21 n 8 Aug 1974 p 13-15 CODEN: KUPLAK

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (PLASTICS, Fire  
Resistance), LEGISLATION, (PLASTICS INDUSTRY, Switzerland),

CARD ALERT: 415, 817, 902, 914

This paper summarizes the highlights of the Swiss Legislation  
imposing test standards for building materials in respect to their  
flammability and fire resistance. Details of the code requirements  
are presented with particular attention to the use of plastics in  
building applications. In German.



ID NO.- EI740953514 453514

KUNSTSTOFFE IM BRUECKENBAU. \$left bracket\$ Application of Plastics  
in Bridge Construction \$right bracket\$ .

Depke, Fritz M.

Tiefbau v 16 n 6 Jun 1974 p 463-467 CODEN: TFBABE

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (BRIDGES,  
Construction), (CONCRETE CONSTRUCTION, Plastics Applications),

CARD ALERT: 401, 405, 817

5 refs. In German.

ID NO.- EI740850831 450831

HARD URETANCELLPLAST: TRENDER OCH FORDRINGAR INOM BYGGSEKTORN. \$left  
bracket\$ Rigid Polyurethane Foam in the Building Industry \$right  
bracket\$ .

Green, William

Imp Chem Ind Ltd, Manchester, Engl

Plastvarlden n 4 Apr 1974 p 27-29 CODEN: PLTVAS

DESCRIPTORS: \*POLYURETHANES, (BUILDING MATERIALS, Plastics),

CARD ALERT: 415, 817

The building industry is considered to represent the largest  
potential market for PUR rigid foams and it is consequently the  
subject of considerable interest from the producers of plastics. 11  
refs. In Swedish with English abstract.

ID NO.- EI740847179 447179

POLYMER-IMPREGNATED CONCRETE AS A STRUCTURAL MATERIAL.

Chen, Wai-Fah; Dahl-Jorgensen, Einar

Lehigh Univ, Bethlehem, Pa

Mag Concr Res v 26 n 86 Mar 1974 p 16-20 CODEN: MCORAV

DESCRIPTORS: (\*CONCRETE CONSTRUCTION, \*Plastics Applications),

BUILDING MATERIALS, POLYMERS,

IDENTIFIERS: POLYMER-IMPREGNATED CONCRETE

CARD ALERT: 405, 415, 815, 817

This paper reports an investigation designed to increase the ductility of polymer-impregnated concrete so that some plastic yielding can take place before and after the ultimate load is reached. Various percentages of monomer combinations of the methyl methacrylate were used with an elastomer, n-butylacrylate. The entire stress-strain relationship of the materials was determined by means of the splitting tensile and axial compression tests.

ID NO.- EI740846670 446670

ATTACK BY THE ELEMENTS.

Haigh, I. P.

Civ Eng (Lonl) n 811 Feb 1974 p 32-33, 35, 37, 39 CODEN: CVEGA5

DESCRIPTORS: (\*BUILDINGS, \*Protection), PROTECTIVE COATINGS,  
BUILDING MATERIALS, (CONCRETE REINFORCEMENTS, Corrosion),

CARD ALERT: 402, 415, 813, 914

Methods for reduction of the corrosive effects of the elements upon structures and methods of protecting construction materials are discussed. Discussion deals with protection by painting, rainfall penetration, flood risk, atmospheric moisture, the weathering of plastics, frost action, sulfate action, corrosion of reinforcement, and erosion and cavitation. 18 refs.

ID NO.- EI740846662      446662  
PLAST PA BYGGEXPON CONSTRUCTA 74 I HANNOVER.      \$left bracket\$  
Constructa '74 in Hannover \$right bracket\$ .  
Stoeckhert, Klaus  
Plastvarlden n 4 Apr 1974 p 45-47      CODEN: PLTVAS  
DESCRIPTORS: (\*BUILDINGS, \*Exbitions), (BUILDING MATERIALS, Plastics  
, (EXHIBITIONS, West Germany),  
CARD ALERT: 402, 415, 817, 911  
The largest international building exhibition of the year,  
Constructa in Hannover, is ended. This report shows i. a. that the  
manufacturers of plastic raw materials are attracted by this type of  
special exhibitions. In Swedish with English abstract.

ID NO.- EI740743382 443382

INSATZ VON GLASFASERVERSTAERKTEN POLYESTER-BESCHICHTUNGEN IM  
BAUWESEN. \$left bracket\$ Use of Glass Fiber Reinforced Polyester  
Coatings in Construction Industry \$right bracket\$ .

Hohn, Herbert; Bischoff, Rudolf

Spezialbaukomb, Magdeburg, E Ger

Bauplanung - Bautech v 28 n 2 Feb 1974 p 70-73 CODEN: BABAAL

DESCRIPTORS: \*PLASTICS, REINFORCED, POLYESTERS, GLASS RIBER, (  
BUILDING MATERIALS, Plastics),

CARD ALERT: 413, 817

In German.

ID NO.- EI740743369 443369  
GB MARKETS FOR PLASTICS \$EM DASH\$ 2.

Anon

Europlast Mon v 47 n 4 Apr 1974 p 48-52 CODEN: EUPLAM

DESCRIPTORS: (\*PLASTICS INDUSTRY, \*United Kingdom), (BUILDING MATERIALS, Plastics), (PACKAGING MATERIALS, Plastics), (FURNITURE MANUFACTURE, Plastics Applications),

CARD ALERT: 415, 694, 817

In this second part of the survey of the plastics industry in the United Kingdom, a detailed report is presented on the application of plastics in 13 major industry sectors. Statistical data are tabulated and discussed.



ID NO.- EI740739739 439739

SANIERUNG UND TRAGFAEHIGKEITSERHOEHUNG KORRODIERTER STAHLBETONKONSTRUKTIONEN DURCH DEN EINSATZ VON HARZMOERTELN. \$left bracket\$ Repair and Increase of the Load Carrying Capacity of Corroded Reinforced Concrete Structures by Using Resinous Mortars \$right bracket\$ .

Martin, Joachim

Hochsch fuer Bauwes, Leipzig, E Ger

Bauzeitung (Berl) v 28 n 2 Feb 1974 p 101-103 CODEN: BAZTAP

DESCRIPTORS: (\*CONCRETE CCNSTRUCTION, \*Maintenance), (CONCRETE REINFORCEMENTS, Corrosion), (BUILDING MATERIALS, Plastics), MORTAR,

CARD ALERT: 405, 412, 817

In German.

ID NO.- EI740739232 439232

POLYMER CONCRETE SHOWS PROMISE AS PATCHING MATERIAL.

Galler, Sol; Steinberg, Meyer

Public Works v 105 n 5 May 1974 p 92-93 CODEN: PUWOAH

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (CONCRETE  
CONSTRUCTION, Plastics Applications), POLYMERS,  
IDENTIFIERS: POLYMER CONCRETE, PATCHING MATERIALS  
CARD ALERT: 405, 415, 815, 817

The new product, consisting of sand, stone and methyl methacrylate, a chemical which solidifies upon activation to bond these materials firmly together, and is called polymer concrete was developed. The product possesses the property of developing strength greater than conventional portland cement concrete within two hours of application.

REINFORCED PLASTICS FOR THE DEVELOPING COUNTRIES.

Mettes, D. G.

Owens-Corning Fiberglas Corp

Plast Ind in a Developing World, Int Symp, Prepr, London, Engl, Jun 18-20 1973 pap 6, 18 p. Available from Plast Inst, London, Engl, 197

DESCRIPTORS: \*PLASTICS, REINFORCED, (PLASTICS INDUSTRY, Developing Countries), (BUILDING MATERIALS, Plastics),

CARD ALERT: 415, 817

GFRP and its associated technology can contribute greatly to the growth and development of the developing countries. The low capital investment and basic simplicity of open-mold processes and low pressure closed-mold processes are ideally suited for the variety of small and moderate-size product markets. In addition to its inherent material properties, GRP offer the developing countries various magnitudes of required investment, various production processes (technologies), numerous product opportunities, and general business stimulation. Market areas expected to soon have better than average growth rates in developing countries are corrosion-resistant products, construction, marine products and land transportation.

ID NO.- EI740636096 436096  
HARD URETANCELLPLAST. \$left bracket\$ Foamed Rigid Polyurethane  
\$right bracket\$ .  
Green, William  
Imp Chem Ind, London, Engl  
Plastvarlden n 3 Mar 1974 p 40-42, 44 CODEN: PLTVAS  
DESCRIPTORS: (\*PLASTICS, FOAMED, \*Physical Properties),  
POLYURETHANES, (BUILDING MATERIALS, Plastics),  
IDENTIFIERS: RIGID POLYURETHANE FOAMS  
CARD ALERT: 415, 817, 931

The article reports on the development in the area of foamed rigid polyurethane and indicates future trends and demands on this type of material. Foamed polyurethane with high and low density is discussed together with problems of waste recovery. 7 refs. In Swedish.

ID NO.- EI740636085 436085

CELLULAR PROFILES \$EM DASH\$ THE WOOD OF THE FUTURE?

Nightingale, R. J.

Europlast Mon v 47 n 2 Feb-Mar 1974 p 41-45 CODEN: EUPLAM

DESCRIPTORS: \*PLASTICS, FOAMED, (PLASTICS INDUSTRY, United Kingdom),  
(BUILDING MATERIALS, Plastics), (PLASTICS, Extrusion),

IDENTIFIERS: FOAM PROFILES

CARD ALERT: 415, 816, 817

The UK market for extruded cellular profiles, mainly for wood replacements, is about to take off. Already four companies are in production and many more are about to start. The boom is expected to parallel that experienced in the USA where the foam profile market rocketed from nil in 1971 to an estimated 20,000t last year. This article concentrates on the different applicational areas, technologies and base material requirements and looks at the machinery on the market. Some licensed systems are detailed.

ID NO. - EI740634121 434121

DEVELOPMENT OF A LOW COST HOUSE FOR BANGLADESH USING INDIGINOUS RAW MATERIALS AND PLASTICS RESINS.

Winfield, Armand G.; Winfield, Barbara L.

Armand G. Winfield Inc, West Babylon, NY

Plast Ind in a Developing World, Int Symp, Prepr, London, Engl, Jun 18-20 1973 Pap 14, 12 p. Available from Plast Inst, London, Engl, 1973

DESCRIPTORS: (\*HOUSES, \*Bangladesh), (BUILDING MATERIALS, Plastics),

CARD ALERT: 402, 415, 817

This is a report on a R&D program which has aimed at a house suitable for people in developing countries in regard to its low price. The reported part of the program is its first phase from inception through material feasibility studies, prototype construction and full scale testing. The first prototype indicated costs within 15% of our goals and subsequent work has lowered the cost figures to reach the initial goals. Continuing research is being conducted to provide a new prototype with modified designs which accommodates a panel system. Further testing and study is under way. The prototype is based on jute, glass fiber and plastics.

ID NO.- EI740631750 431750

BUILDING WITH PLASTICS \$EM DASH\$ PROBLEMS AND PROSPECTS IN DEVELOPING COUNTRIES.

Ratra, O. P.

Natl Build Organ and UN Reg Housing Cent, New Delhi, India

Plast Ind in a Developing World, Int Symp, Prepr, London, Engl, Jun 18-20 1973 Pap 13, 21 p. Available from Plast Inst, London, Engl, 1973

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (PLASTICS INDUSTRY, Developing Countries),

CARD ALERT: 415, 817

Developing countries have been the target of exploitation for increased use of plastics in building, to solve the growing demand on housing needs. Many novel solutions such as low-cost plastics-based building systems have been advocated by the experts in developed countries. User requirements and user habits have been invariably overlooked. Regional collaboration, assessment of regional requirements, formation of Agreement Boards and Associations to look after the interests of the subject in developing countries under the patronage of international agencies like UNIDO are some of the directions in which realistic progress is anticipated in promoting the use of plastics in building. Estimated consumption data of plastics in some developing countries are tabulated with emphasis on building applications. 44 refs.



ID NO.- EI740631749

431749

PLASTICS FOR BUILDING IN DEVELOPING COUNTRIES.

Crowder, J. R.

Build Res Establ

Plast Ind in a Developing World, Int Symp, Prepr, London, Engl, Jun 18-20 1973 Pap 12, 8 p. Available from Plast Inst, London, Engl, 197

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (PLASTICS INDUSTRY, Developing Countries),

CARD ALERT: 415, 817

The universal need for more building is reviewed, and the expectation of better standards of construction. The part that plastics can play in meeting these needs is discussed in terms of their properties. Possible areas of application for developing countries, in structures, components, finishes and services, are described.

ID NO.- EI740631748 431748

ZUR THEORIE UND KONSTRUKTION DER PLASTBAUWERKE. \$left bracket\$ On the Theory and Design of Plastics Structures \$right bracket\$ .

Zimmer, Karlheinz

Wiss Z Tech Univ Dresden v 22 n 5 1793 p 891-897 CODEN: WZTUAU

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (STRUCTURAL DESIGN, Light Weight), (PLASTICS, REINFORCED, Structural Applications),

CARD ALERT: 817, 408, 415

Thin-walled structures from fiber-reinforced plastics are increasingly used in the construction industry, especially as roofing and enclosure elements. The article gives some recommendations for the calculation of the design of such plastic structures. Data, obtained experimentally, on the state of stress and strain of positively and negatively moved shell supports from glass fiber-reinforced unsaturated polyester resins, are also presented. In German.

ID NO.- EI740530204 430204

ZUR KRAFTEINLEITUNG IN PLASTBAUTEILE. \$left bracket\$ Force  
Transmission into Plastics Structural Components \$right bracket\$ .  
Knauer, B.

Tech Univ, Dresden, E Ger

Plaste Kautsch v 20 n 12 Dec 1973 p 921-932 CODEN: PLKAAM

DESCRIPTORS: \*STRUCTURAL DESIGN, (BUILDING MATERIALS, Plastics), (PLASTICS, REINFORCED, Testing), MATHEMATICAL TECHNIQUES,

IDENTIFIERS: STRUCTURAL PLASTICS COMPONENTS

CARD ALERT: 408, 415, 421, 817, 921

Results obtained with the resistance against specific pressure on hole as well as with the punctual and linear transmission of forces under short and long-time stress are given with a view to controlling better local stress concentrations in plastic components, mainly of reinforced plastics. Important geometrical parameters are discussed, such as thickness of components, size of hole and distance from edge. From design methods demonstrated experimentally information is given on conditions enabling metallic inserts to be abandoned. 15 refs. In German.

ID NO.- EI740528901 428901

AUSSENWAENDE AUS PVC-HOHLPROFILEN. \$left bracket\$ External Walls  
Made of PVC Hollow Profiles \$right bracket\$ .

Stolp, Karin; Seidler, Rosmarie

Bauakad, Leipzig, E Ger

Plaste Kautsch v 20 n 11 Nov 1973 p 845-848 CODEN: PLKAAM

DESCRIPTORS: (\*POLYVINYL CHLORIDE, \*Physical Properties), (BUILDING  
MATERIALS, Plastics), (PLASTICS INDUSTRY, East Germany),

IDENTIFIERS: PVC HOLLOW PROFILES

CARD ALERT: 415, 817, 931

This paper reports on applications of high impact PVC hollow  
profiles in the East German building industry for outside uses.  
Design details are given and some properties and performance of high  
impact modified rigid PVC profiles are discussed. these materials  
have been proven flame retardant. Application field includes  
industrial and agricultural buildings. 4 refs. In German.

ID NO. - EI740528728

428728

FLEXURAL WRINKLING IN FOAM-FILLED SANDWICH PANELS.

Chong, Ken P.; Hartsock, John A.

Stran-Steel Corp, Houston, Tex

ASCE J Eng Mech Div v 100 n EM1 Feb 1974 p 95-110 CODEN: JMCEA3

DESCRIPTORS: (\*PLATES, \*Buckling), SANDWICH STRUCTURES, MECHANICS,  
BUILDING MATERIALS, PLASTICS, FOAMED,

IDENTIFIERS: SANDWICH PANELS, WRINKLING

CARD ALERT: 402, 408, 415, 817, 931

A rational theory is presented for predicting the critical wrinkling stress from the properties of the core and faces. Five types of panels with three face configurations and four kinds of rigid urethane foam were subjected to center point loading. Critical wrinkling stresses were observed where there was a deviation in the initial linear load/strain relationship. 11 refs.

ID NO.- EI740528727 428727

PLASTICS CORRUGATED CLIMBS OUT OF THE BOX.

MacBride, Roland R.

Mod Plast v 51 n 3 Mar 1974 p 46-48 CODEN: MOPLAY

DESCRIPTORS: \*PLASTICS SHEETS, (CONTAINERS, Plastics), (PACKAGING MATERIALS, Plastics), (BUILDING MATERIALS, Plastics),

IDENTIFIERS: THERMOPLASTICS CORRUGATED SHEETS

CARD ALERT: 415, 694, 817

This paper reviews applications of thermoplastics corrugated sheets in such fields where until recently were used conventional materials. Corrugated plastics sheet are replacing pulp-based product for shipping cartons. Other applications such as the outdoor glazing sign and display markets could take big tonnage in thermoplastics. Suppliers gear up to meet materials/equipment demand.

ID NO.- EI740528671 428671

EXPANDED POLYSTYRENE CEILING TILES.

Scott, K. A.; Paul, K. T.

RAPRA Members J v 1 n 10 Oct 1973 p 253-259 CODEN: RPMJA7

DESCRIPTORS: (\*PLASTICS, FOAMED, \*Flammability), (POLYSTYRENES, Testing), (BUILDING MATERIALS, Plastics),

CARD ALERT: 415, 423, 817

Results of an investigation are presented which was carried out to study the behavior and performance of expanded PS ceiling tiles in large scale fires. The work included the effects of tile thickness and various surface coatings and was an extension of the earlier work carried out by the Fire Research Stations. In general, the work confirmed the original findings and increased understanding and knowledge of the problems involved.

ID NO.- EI740524804 424804

ABDICHTUNGSVERFAHREN MIT BITUMENEMULSIONEN UND DEREN KOMBINATIONEN  
MIT KUNSTSTOFFDISPERSIONEN. \$left bracket\$ Sealing by Means of  
Bituminous Emulsions and Their Combination by Using Plastics  
Dispersions \$right bracket\$ .

Kreis, Johannes; Pehse, Volker; Lier, Werner

Paraffinwerk \$left double quote\$ Vorwaerts \$right double quote\$ ,

Bauzeitung (Berl) v 28 n 1 Jan 1974 p 41-42 CODEN: BAZTAP

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), SEALS, (BITUMINOUS  
MATERIALS, Rubber Additions), (PLASTICS, Dispersions), EMULSIONS,

CARD ALERT: 411, 619, 804, 817, 818

17 refs. In German.



ID NO.- EI740421705 421705

FIRE RETARDANT FRP IN CONSTRUCTION.

Trampenau, Richard H.; Evans, T. Richard

Diamond Shamrock Chem Co, Redwood City, Calif

SPI Reinf Plast Div, Proc, Annu Tech Conf 28th, Washington, DC, Feb 6-9 1973, Pap, Sect 4-C, 6 p CODEN: PCRPB6

DESCRIPTORS: (\*PLASTICS, REINFORCED, \*Flame Resistance), (BUILDING MATERIALS, Plastics), (BUILDINGS, Legislation),

CARD ALERT: 402, 415, 817, 914

The reasons for the sluggish market growth of GFRP in construction applications are studied. The many different building codes are listed and explained. Resin development to conform to the strict code enforcement and changing codes of today is offered. A number of conclusions regarding smoke generation are presented. A series of case histories describing the successful application of GFRP in the construction industry is also presented.

ID NO.- EI740420111 420111

OPYT PRIMENENIYA POLIMERNYKH MATERIALOV V GIDROTEKHNICHESKOM  
STROITEL'STVE. \$left bracket\$ Experience in Use of Polymeric  
Materials in Construction of Hydraulic Structures \$right bracket\$ .

Popchenko, S. N.; Glebov, V. D.; Igonin, L. A.

Gidrotekh Stroit n 12 Dec 1973 p 9-13 CODEN: GTSTA8

DESCRIPTORS: \*HYDRAULIC STRUCTURES, (BUILDING MATERIALS, Plastics),  
POLYMERS,

CARD ALERT: 415, 632, 817

In Russian.

## SOLAR AIR CONDITIONING WITH FILM AND FOAM.

Anon

Mod Plast v 51 n 2 Feb 1974 p 43 CODEN: MOPLAY

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), PLASTICS FILMS, PLASTICS, FOAMED, POLYETHYLENES, POLYURETHANES, (AIR CONDITIONING, Solar Energy System),

CARD ALERT: 402, 415, 643, 817

A heat-cooling of a house is described which includes rooftop system of water-filled low density PE bags and sliding polyurethane panels, for temperature control. The ranch-style dwelling has a flat, steel roof to support the 30 tons (7000 gal.) of noncirculating water contained in the plastic tubing. The film/foam air-conditioning system is hidden by redwood soffit and fascia. Roof area, measuring 52 by 36 ft., is divided by steel beams into four central longitudinal sections. In summer months, the panels are extended to full-cover position by day, to ward off solar heat and keep the interior of the house cool. At night, the panels retract exposing the water bags to the cooler night air. In winter, the positions are reversed, with the water bags exposed to sun during the day and covered at night.

ID NO.- EI740417882 417882

HOW TO USE GOVERNMENT AGENCIES TO SELL NEW PLASTICS BUILDING PRODUCTS.

Bedell, Donald W.

Bedell Assoc, Washington, DC

SPI Reinf Plast Div, Proc, Annu Tech Conf 28th, Washington, DC, Feb 6-9 1973, Pap, Sect 4-F, 1 p CODEN: PCRPB6

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (BUILDINGS, Legislation),

CARD ALERT: 402, 415, 817

This is an extended abstract of a contribution which describes in detail 6 case histories, successful and unsuccessful, measuring the rewards and penalties to companies which cooperated with governmental agencies in getting their acceptance for new plastics building materials.

ID NO.- EI740417881 417881

NEW CONTRIBUTIONS OF FRP IN THE CONSTRUCTION INDUSTRY.

Powell, David

Polyplan Ltd, Leicester, Engl

SPI Reinf Plast Div, Proc, Annu Tech Conf 28th , Washington, DC,  
Feb 6-9 1973, Pap, Sect 4-E, 10 p CODEN: PCRPB6

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), PLASTICS, REINFORCED,  
(SCHOOL BUILDINGS, Plastics Application),

CARD ALERT: 402, 415, 817

The application of GRP for external envelope of buildings \$EM DASH\$ cladding panels \$EM DASH\$ shows signs of growing tenfold by 1985 in the United Kingdom, and is also likely to develop in other European countries as a major use of GRP in building. As an example of the problems and advantages of GRP when employed in this way, a school which used GRP for this purpose is described. Costs were lower than for comparable methods; fire requirements were studied and met; fixing is detailed; and the use of polyurethane for surface finishes is described. Reference is also made to a project for the Royal Navy which will ultimately utilize some 300,000 sq ft. of external cladding in GRP. Many design details are included in this report.

ID NO.- EI740417880 417880

MEANING OF PERFORMANCE CONCEPTS FOR PLASTICS IN CONSTRUCTION.

McDermott, Joseph S.

SPI Plast in Constr Counc, New York, NY

SPI Reinf Plast Div, Proc, Annu Tech Conf 23th, Washington, DC, Feb  
6-9 1973, Pap, Sect 4-A, 3p CODEN: PCRPB6

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (PLASTICS, REINFORCED  
, Structural Application),

IDENTIFIERS: PERFORMANCE CONCEPTS

CARD ALERT: 402, 415, 817

This paper attempts to organize the several ways in which the performance concept is being used in building technology in the developed countries. Special attention is given to the theory of performance standardization current at the National Bureau of Standards, and by contrast the realities of implementing it there and elsewhere. A second phase of these observations relates the performance concept to the growth of reinforced plastics in building, including several specific current developments. The fire hazard issue is a frequent reference point. All that follow are working statements; that is, the assumptions as well as the explicit questions are meant for discussion. 4 refs.

ID NO. - EI740417879 417879

ARCHITECTS VIEW OF PLASTICS.

Taylor, K.

Abbey, Hanson, Rowe & Partners, Shrewsbury, Engl

RAPRA Members J v 1 n 7 Jul 1973 p 165-166 CODEN: RPMJA7

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (PLASTICS INDUSTRY, United Kingdom),

CARD ALERT: 402, 415, 817

This paper gives a down-to-earth view of the present and possible use of plastics materials in building \$EM DASH\$ expressed by an architect with practical experience and practical knowledge of the materials at present available.

ID NO.- EI740315552 415552

25 ACRES OF STEEL AND PLASTIC ROOF COVER LONDON'S NEW MARKET.

Anon

Eng News Rec v 192 n 3 Jan 1974 p 18-19 CODEN: ENREAU

DESCRIPTORS: (\*ROOFS, \*Steel), (BUILDING MATERIALS, Plastics),  
STRUCTURAL DESIGN,

CARD ALERT: 402, 545, 817

The roof structure described consists of hollow rolled steel sections, 5.5 in. in diam, in a \$left double quote\$ v \$right double quote\$ configuration. The steel acts as a structural membrane and takes some of the roof load. Spans vary from 100 to 130 ft with sheets pinned together. Seven main roof trusses, from 100 to 530 ft long and spaced 69 ft apart, rest on the columns. The tops of the trusses were connected by light steel which in turn supports the edges of the plastic roof units. Each unit is 11.5-ft-square, formed in the shape of an inverted truncated pyramid.



ID NO.- EI740312299

412299

HERSTELLUNG UND ANWENDUNG VON FLAECHEHHEIZLEITERN AUS  
NICHMETALLISCHEN WERKSTOFFEN. \$left bracket\$ Production and  
Applications of Surface Heating Conductors from Non-metallic Materials  
\$right bracket\$ .

Aigner, R.; Haasemann, P.

Farbwerke Hoechst, Gendorf, Ger

Kunststoffe v 63 n 11 Nov 1973 p 769-771 CODEN: KUNSAV

DESCRIPTORS: \*ELECTRIC HEATING ELEMENTS, PLASTICS, REINFORCED,  
FLUORINE CONTAINING POLYMERS, GRAPHITE, (BUILDING MATERIALS, Plastics)

IDENTIFIERS: CARBON FIBER

CARD ALERT: 415, 704, 804, 817

This paper deals with the production of heating plates in which a combination of carbon black/graphite conductors embedded in PTFE machines is used as an electrical resisting material. Technological and performance details are discussed and examples of industrial and domestic applications are given. The new type of heaters which are based on the use of electrical energy are compared with those based on the use of oil fuel and gas in regard to their installation and operational costs as well as durability and performance. In German.

ID NO.- EI740311782 411782

PLASTICS HELP CONCRETE BEAR THE LOAD.

Martino, Robert

Mod Plast v 51 n 1 Jan 1974 p 53-55 CODEN: MOPLAY

DESCRIPTORS: (\*CONCRETE CONSTRUCTION, \*Plastics Applications),  
CONCRETE AGGREGATES, (BUILDING MATERIALS, Plastics),  
CARD ALERT: 405, 412, 415, 817

The paper discusses various types cement-polymer composite materials which found uses in the construction industry in load-bearing applications. The new technology uses plastics as an additive to, or as total replacement for, one or more of these constituents. Among the most promising recipes are \$EM DASH\$ polymer-impregnated concrete, polymer concrete (cement entirely replaced by plastic), and polymer-cement concrete (monomer replaces some water and some cement in the wet concrete mix, forming with cement a dual binder). It is concluded that stronger and more durable than conventional concrete, polymer/concrete composites are poised for heavy-duty future in building and construction. Coming new markets for polymer-impregnate concrete are indicated as follow \$EM DASH\$ tunnel support linings; pipe and draintile; desalinization facilities; housing; and underwater habitats.

ID NO. - EI740311396

411396

PLASTIC BATHROOM: TAILORED TO PRODUCER AND CONSUMER NEEDS.

McDermott, Joseph S.

Constr Specifier v 26 n 12 Dec 1973 p 51-55 CODEN: COSPAJ

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics),

CARD ALERT: 415, 817

Industry standards and manufacturing processes examined cover design and methods of forming. Four basic types of construction are described.

ID NO.- EI740311370 411370

INVESTIGATION OF POLYMER-IMPREGNATED BRICK MASONRY.

Fowler, David W.; Fraley, Thomas J.

Univ of Tex, Austin

ASCE J Struct Div v 100 n St1 Jan 1974 Pap 10278 p 1-10 CODEN:  
JSDEAG

DESCRIPTORS: \*BRICK CONSTRUCTION, BRICK, (BUILDING MATERIALS,  
Plastics), POLYMERS, POLYMERIZATION, MORTAR,

IDENTIFIERS: MASONRY

CARD ALERT: 405, 414, 815, 817

Brick, brick prisms, and mortar specimens were impregnated with methyl methacrylate and polymerized by either a thermal-catalytic process or irradiation. Common brick and high-strength brick were used in the investigations. Compressive strength of polymer-impregnated common brick prisms increased 200% to 300% over the strength of a maximum of 18,088 psi. Brick compressive strength and moduli of rupture, and mortar compressive and tensile strength also showed significant increases due to polymerization. The mortar-brick bond strength increased by more than 10 times. 8 refs.

ID NO.- EI740208726

408726

IN FIRE SAFETY, THE FUTURE IS NOW \$EM DASH\$ 3.

MacBride, Roland R.

Mod Plast v 50 n 11 Nov 1973 p 63-67 CODEN: MOPLAY

DESCRIPTORS: (\*PLASTICS, \*Flammability), (BUILDING MATERIALS, Plastics), (MATERIALS TESTING, Standards),

CARD ALERT: 415, 423, 817, 914

This paper discusses the fire hazards incorporated in the use of plastics in construction building applications. Emphasis is put on the systems of engineering approach which provide computerized fire safety devices which operate automatically. Examples from practice are discussed and some recommendations for future testing standard as well as future legislations are suggested.

ID NO.- EI740208724 408724

EXTRUDIEREN VON PROFILEN UND ROHREN. \$left bracket\$ Extrusion of Profiles and Pipes \$right bracket\$ .

Berger, P.; Kraemer, A.

BASF, Ludwigshafen, Ger

Kunststoffe v 63 n 10 Oct 1973 p 678-682 CODEN: KUNSAV

DESCRIPTORS: (\*PLASTICS, \*Extrusion), PIPE, PLASTIC, BUILDING MATERIALS, FURNITURE MANUFACTURE, PLASTICS, FOAMED, PLASTICS MACHINERY

IDENTIFIERS: PLASTICS PROFILES, PLASTICS EXTRUSION LINES

CARD ALERT: 415, 816, 817

Machinery, extrusion dies and take off equipment are described which are used in West Germany in the manufacture of various profiles and tubes made of PVC, PS, PE and other structural plastics. A survey is given of profiles and other structural members obtained by extrusion and used in furniture as well as construction-building industries. Particular attention is given to extrusion of structural foam profiles (PS and PVC) and of solid PVC profiles employed in windows and doors. Some die considerations, calibration, cooling, take-off, etc. are included in this survey of technological progress in the West German plastics industry. 1 ref. In German.

ID NO.- EI740205650 405650

FIBER COMPOSITES: NEW STRUCTURAL MATERIALS.

Mole, Alan

Univ of Colo, Boulder

Civ Eng (NY) v 43 n 12 Dec 1973 p 72-74 CODEN: CIVEBS

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), COMPOSITE MATERIALS, PLASTICS, REINFORCED,

CARD ALERT: 415, 817

The author emphasizes that fiber reinforced plastics may soon be used in long span structures and surface vehicles. Plastics, such as graphite/epoxy and PRD-49/epoxy, offer four times the strength-to-weight ratio of the strongest (300 ksi) steels.

ID NO.- EI740205649

405649

FORGET BLUE-SKY, THE PLASTICS BUILDING BOOM WILL BE ALONG MORE CONVENTIONAL LINES.

Wood, A. Stuart

Mod Plast v 50 n 10 Oct 1973 p 82-84 CODEN: MOPLAY

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics),

CARD ALERT: 402, 415, 817

This article reviews recent progress in applications of plastics in the construction-building industry. The following trends are indicated: large-scale lumber replacement by a new generation of structural foam materials; growing emphasis on industrialized building with systems based largely on plastics; continued growth by established volume uses like pipe, panels, siding, bathroom fixtures, insulations, glazing, etc. , and no letup in the fast-growing mobile home field. Forecast for the future up to 1985 is included.



ID NO. - EI740103565 403565

SCHLAGZAHE PVC-COMPOUNDS FUER DEN AUSSENEINSATZ \$EM DASH\$ 2.  
ANWENDUNGSGEBIETE, BAUPRINZIPIEN, GUETERICHTLINIEN. \$left bracket\$  
High-Impact PVC Compounds for Outdoor Uses \$EM DASH\$ 2. Application  
Fields Construction Techniques and Quality Specifications \$right  
bracket\$ .

Hundertmark, G.

Chem Werke Huels, Marl, Ger

Plastverarbeiter v 24 n 8 Aug 1973 p 477-483 CODEN: PLARAN

DESCRIPTORS: (\*POLYVINYL CHLORIDE, \*Mechanical Properties), (BUILDING MATERIALS, Plastics),

CARD ALERT: 415, 421, 817

In this second part of an article series, the author discusses the major applications, the technical problems arising in building construction, and outlines property and performance requirement for the PVC sheets. Major uses to be mentioned include window profiles, curtain wall sections, curtain wall panels, gutters. The building code specifications existing for these large applications, which are independent of the materials, are also met by the plastics components. The special properties of high-impact PVC frequently offer particular advantages. To ensure a high quality standard, test methods were devised and finished components subjected to comprehensive testing. Some of the test results are embodied in standard and quality specifications. 2 refs. In German.

ID NO.- EI740103561 403561

ISOTAR \$EM DASH\$ TWORZYWO POLIURETANOWE ORAZ WSTEPNE BADANIA NED  
JEGO STABILIZACJA. \$left bracket\$ Polyurethane Construction Material  
\$left double quote\$ Isotar \$right double quote\$ and Preliminary  
Studies on Its Stabilization \$right bracket\$ .

Hoffmann, Aleksandra; Makarski, Stanislaw; Rajkiewicz, Maria

Polimery v 18 n 6 Jun 1973 p 319-322 CODEN: POLIA4

DESCRIPTORS: (\*POLYURETHANES, \*Stabilizers), (BUILDING MATERIALS,  
Plastics),

CARD ALERT: 415, 804, 817

A general characteristics of the Polish polyurethane used mainly for lining the pavements of the running tracks, have been given. Experiments on the stabilization of this material by using three different thermal stabilizers together with an UV-absorber have been performed. No distinct effect of these stabilizers on the tensile strength and elongation at break has been found. Basing on the results of studying the changes in elasticity and in the resistance to punching with a spike, the best stabilizing properties have been attributed to a mixture of stabilizer MDP 305 and Tinopal P. 21 refs. In Polish.

ID NO.- EI740103447 403447

ALIPHATIC POLYAMIDES FOR CONSTRUCTIONAL PURPOSES.

Nosova, L. A.; Vlasova, K. N.; Dobrokhotova, M. K.; Samokhvalov, A. V.; Ivanova, S. L.; Zadova, M. A.; Dukor, A. A.; Ivanova, G. P.

Sov plast n 4 1973 p 21-25 CODEN: SOPLAW

DESCRIPTORS: (\*POLYAMIDES, \*Physical Properties), (BUILDING MATERIALS, Plastics), PLASTICS, REINFORCED,

CARD ALERT: 415, 817, 931

An extensive survey is given of the synthesis, chemical and physicomachanical properties, including antifriction properties, and uses, of materials based on aliphatic polyamides, including blends and filled compositions. 9 refs.

ID NO.- EI740103315 403315

STATISCHE UND DYNAMISCHE DEFORMATIONSEIGENSCHAFTEN EINIGER  
KONSTRUKTIONSPASTE. \$left bracket\$ Static and Dynamic Deformation  
of Some Structural Plastics \$right bracket\$ .

Achmedow, A. G.; Baschirow, A. B.; Selenew, Ju. W.

Azerb SSR Staatuniv, Baku

Plaste Kaut v 20 n 8 Aug 1973 p 623-625 CODEN: PLKAAM

DESCRIPTORS: (\*PLASTICS, \*Deformation), (BUILDING MATERIALS,  
Plastics), (POLYMERS, Creep),

CARD ALERT: 415, 421, 817

The authors discuss the deformational behavior of polymers of different molecular and ultramolar structures. Various methods of evaluating measuring data are presented which have been obtained in static and dynamic determination of creep and stress relaxation experiments. Effect of temperature on the behavior and performance of structural plastics is also dealt with in relation to molecular- and micro-structure of polymers investigated. 14 refs. In German.

ID NO.- EI740100710 400710

OPTIMIZATION OF FIBER REINFORCED COMPOSITE STRUCTURES.

Khot, N. S.; Venkayya, V. B.; Johnson, C. D.; Tischler, V. A.

Air Force Flight Dynamics Lab, Wright-Patterson Air Force Base, Ohio

Int J Solids Struct v 9 n 10 Oct 1973 p 1225-1236 CODEN: IJSOAD

DESCRIPTORS: (\*COMPOSITE MATERIALS, \*Mechanical Properties),  
PLASTICS, REINFORCED, BUILDING MATERIALS,

IDENTIFIERS: OPTIMIZATION, FIBER REINFORCEMENT

CARD ALERT: 415, 817, 931

The paper presents an efficient optimization method, based on strain energy distribution and a numerical search, for the minimum weight design of structures made from fiber reinforced composite materials. The optimum design procedure takes into consideration multiple loading conditions and displacement constraints on the structure. Sample problems consisting of both isotropic and composite elements are solved and the results presented. 10 refs.

ID NO.- EI740100492 400492

POLYCARBONATE CANOPY FOR SWINDON SHOPPING CENTRE.

Anon

Polym Age v 4 n 9 Sep 1973 p 330 CODEN: PLYABP

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), POLYCARBONATES,  
PLASTICS SHEETS,

CARD ALERT: 415, 817

This is a brief description of a canopy for a shopping center in Great Britain which has been made of polycarbonate sheeting as glazing material.

ID NO.- EI731258785 358785

SCHLAGZAEHE PVC-COMPOUNDS FUER DEN AUSSENEINSATZ \$EM DASH\$ 1. ROHSTOFFEIGENSCHAFTEN, STABILISIERUNG UND PIGMENTIERUNG FUER DIE AUSSENVERWENDUNG. \$left bracket\$ High Impact PVC Compound for Outdoor Applications \$EM DASH\$ 1. Material Properties, Stabilization and Coloring for Outdoor Uses \$right bracket\$ .

Menzel, Gerhard

Plastverarbeiter v 24 n 7 Jul 1973 p 397-405 CODEN: PLARAN

DESCRIPTORS: (\*POLYVINYL CHLORIDE, \*Physical Properties), (PLASTICS, Weathering), (BUILDING MATERIALS, Plastics),

CARD ALERT: 415, 423, 817, 931

General property, technological, performance and economic considerations are followed by a detailed discussion of the following topics \$EM DASH\$ property of PVC grades designed for uses in building construction, particularly of extruded profiles and sheets; survey of commercially available high-impact grades; stabilization and stabilizing agents for PVC with enhanced weathering resistance; light stability and UV resistance. Natural weathering and accelerated aging methods are briefly reviewed in regard to their reliability and use in practical applications. In German.

ID NO.- EI731256365 356365  
PLASTICS AID SYSTEM BUILDING.

Anon

Europlast Mon v 46 n 8 Aug 1973 p 64-65 CODEN: EUPLAM

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), PLASTICS, REINFORCED,  
(BUILDINGS, Prefabrication),

CARD ALERT: 402, 415, 817

This is a brief report on the use of prefabricated building components made of/with GRP. The report involves progress made in this field in the Italian construction building industry. Examples of modular elements such as cladding panels, window frameworks, internal and external doors, bathroom monoblocks, etc, are included.



ID NO.- EI731154563 354563

INNOVATIVE URETHANE FOAM COMPOSITES FOR HOUSING.

Stubblefield, D. J.; Falconer, J. P. R.; Moore, T. B.

Washington Univ, St Louis, Mo

Cell Plast Conf, 3rd, Int, Montreal, Que, Sep 26-29 1972 p 320-348.

Publ by SPI, New York, 1972

DESCRIPTORS: \*PLASTICS, FOAMED, COMPOSITE MATERIALS, (BUILDING MATERIALS, Plastics), POLYURETHANES, ROOFS, HOUSES,

CARD ALERT: 402, 415, 816, 817

Two applications of urethane foam to housing are discussed. The first is the development of a bamboo reinforced urethane foam composite roofing material for tropical areas. Preparation of this material, by either a pour/froth technique in a contact molding operation, or by a spray in place operation is described. The second application of urethane foam is in a rationalized building system for use in the rural areas of the U. S. Non-load bearing walls are employed on a structural frame system. A mobile spray in place operation is used. Foam is sprayed on the outside of a low cost sheet material (which becomes the interior finish) attached to the building frame. 19 refs.

ID NO. - EI731154560 354560

UREA-FORMALDEHYDE FOAM APPLICATIONS.

Meyer, Werner T.

U F Chemical Corp, Woodside, New York

Cell Plast Conf, 3rd, Int, Montreal, Que, Sep 26-29 1972 p 89-101.

Publ by SPI, New York, 1972

DESCRIPTORS: \*PLASTICS, FOAMED, UREA, FORMALDEHYDE, (BUILDING MATERIALS, Plastics), (PLASTICS, Agricultural Applications),

CARD ALERT: 415, 804, 817, 821

A family of proprietary urea-formaldehyde foams has been developed and is finding uses in the following applications: In the construction industry, the foam-in-place material results in a thermal and acoustical insulation with very low flammability, heat content and smoke hazard. In agricultural use, the foam acts as a reservoir for water and nutrients increasing the rate of growth and reducing water requirements. It also permits the growth of vegetation on otherwise unplantable substrates (such as slag heaps). The foam will absorb oil and other hydrocarbons from polluted water. Applications in medical and cosmetic, ship-raising, solvent regeneration, rat and insect protection, paper, fertilizer and mine safety have been accomplished. 13 refs.

ID NO.- EI731152172 352172

PLASTICS IN FIRE: BUILDING.

Conf

Plast Inst/Agreement Board Conf, London, Engl, Nov 2-3 1971 Publ by  
Plast Inst, London, Engl, 1971

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (PLASTICS,  
Flammability), MATERIALS TESTING,

CARD ALERT: 415, 423, 817, 914

This volume contains proceedings of 18 papers delivered at the conference, held in London, 1971, devoted to the use of plastics in buildings in regard to their flammability. Fire resistance of various plastics materials such as GFPP, foam, film, etc, is discussed in some detail. British governmental regulations are discussed in some papers. Most of papers deal with test procedures and evaluation of flammability tests used. Some articles have bibliography data.

ID NO.- EI731050357 350357

AUSWAHL DES OPTIMALEN VERSTAERKUNGSSYSTEMS UND DER KOMPONENTEN IN GLASFASERVERSTAERKTEN PLASTEN BEIM PROJEKTIEREN MIT PROFILPLATTEN.  
\$left bracket\$ Selection of the Optimum Reinforcement System and of the GFRP Components when Designing with Profile Plates \$right bracket\$

Iwannikow, W. W.

Technische Universitaet, Gdansk, Pol

Plaste Kaut v 20 n 6 Jun 1973 p 438-441 CODEN: PLKAAM

DESCRIPTORS: \*PLASTICS, REINFORCED, (BUILDING MATERIALS, Plastics), GLASS FIBER, STRUCTURAL DESIGN,

CARD ALERT: 408, 415, 812, 817

Problems relating to the design with profile corrugated plates of FRP are analyzed in view of an optimum choice of the components and their portion. A schematic block diagram is suggested to solve problems by means of electronic data processing. It is based on a method calculating plates with the inclusion of the anisotropy of material properties and its effectiveness is evaluated by means of weight criteria. The calculating results are given and followed by practical information. 10 refs. In German.

ID NO.- EI731047953 347953

LES MATIERES PLASTIQUES DANS LE BATIMENT ET LES DANGERS D 'INCENDIE.  
\$left bracket\$ Plastics in Buildings and Conflagration Danger \$right  
bracket\$ .

Amy, L.

Plast Mod Elastomeres v 25 n 4 May 1973 p 102-108 CODEN: PMELAW

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (PLASTICS,  
Flammability), (PLASTICS, REINFORCED, Flame Resistance),

CARD ALERT: 415, 817, 914

This article gives several examples of buildings which were erected with the use of several plastics, with particular attention to structural members made of polyester-based GFRP. Flammability and fire resistance of many polymers are tabulated and compared to those of conventional materials such as wood, paper, bitumen, linoleum, etc. Examples of fire damage on plastic structural components are presented and discussed. Improvement of fire resistance of GRP through addition of non-flammable ingredients to plastic formulations is also dealt with. In French.

ID NO.- EI731047952 347952

LES MOUSSES RIGIDES DE POLYURETHANE DANS LE BATIMENT: UN MARCHE EN  
EXPANSION. \$left bracket\$ Rigid Polyurethane Foam in Building \$EM  
DASH\$ an Expanding Market \$right bracket\$ .

Anon

Plast Mod Elastomeres v 25 n 4 May 1973 p 94-97, 166 CODEN:  
PMELAW

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), PLASTICS, FOAMED,  
POLYURETHANES,

CARD ALERT: 415, 817

This article reviews materials and their properties, as well as  
processing equipment employed in the construction industry in France.  
Many application examples are given. Results of five tests are  
included. Forecast for future development. In French.

ID NO.- EI730946350 346350

WOOD OF THE FUTURE IS GROWING TODAY \$EM DASH\$ CELLULAR VINYL.

Wood, A. Stuart

Mod Plast v 50 n 7 Jul 1973 p 38-41 CODEN: MOPLAY

DESCRIPTORS: (\*POLYVINYL CHLORIDE, \*Foaming), (PLASTICS, FOAMED, Extrusion), (BUILDING MATERIALS, Plastics),

CARD ALERT: 815

This paper describes recent development in PVC foam technology aimed at replacement of wood products by modified rigid cellular PVC articles in the low density range. Particular attention is given to mass extrusion of various profiles which found applications in the building industry and furniture. Survey includes the newest important processes in the United States and abroad.

ID NO.- EI730842047 342047

PROBLEMATIK DER PRUEFUNG VON FUGENABDICHTUNGSMATERIALIEN UND  
-KONSTRUKTIONEN FUR DEN MONTAGEBAU. \$left bracket\$ Testing of  
Sealing Materials and Sealed Structural Members Designed for Buildings  
\$right bracket\$ .

Bolte, H.

Institut fuer Baustoffe der Bauakademie der DDR, Leipzig, E Ger

Plaste Kaut v 20 n 5 May 1973 p 371 CODEN: PLKAAM

DESCRIPTORS: (\*SEALS, \*Testing), (MATERIALS TESTING, Standards), (BUILDING MATERIALS, Plastics),

CARD ALERT: 415, 421, 619, 817

A brief notice is given on test standards established in East Germany for evaluation of sealing materials used in concrete structures. In German.



ID NO.- EI730838715 338715

ADVANCED COMPOSITES: COST VERSUS DESIGN IMPROVEMENT.

Berg, K. R.

Whittaker Corp, San Diego, Calif

Mech Eng v 94 n 12 Dec 1972 p 27-31 CODEN: MEENAH

DESCRIPTORS: \*COMPOSITE MATERIALS, BUILDING MATERIALS,

CARD ALERT: 411

In considering the use of advanced composites it is important that their primary function be uppermost in the mind of the designer. The use of advanced composites can improve the stiffness of the structure or its fatigue life without an increase in weight, as opposed to common structural metals or glass-reinforced plastics. However, due to their higher cost per pound, the application of advanced composites must be in such a manner as to take full advantage of their high modulus.

ID NO.- EI730838494 338494

PRUEFVERFAHREN ZUR ERMITTLUNG BRANDTECHNISCHER STOFFKENNWERTE. \$left  
bracket\$ Test Method for Determination of Fire Resistance of Materials  
\$right bracket\$ .

Kai, A.; Stolp, K.

Institut fuer Baustoffe der Bauakademid der DDR, Leipzig, E Ger

Plaste Kaut v 20 n 5 May 1973 p 372-373 CODEN: PLKAAM

DESCRIPTORS: (\*BUILDING MATERIALS, \*Testing), (PLASTICS, Fire  
Resistance),

CARD ALERT: 415, 423, 817, 914

Theoretical considerations, test procedure and equipment used in  
East Germany for evaluation of flammability of wood, plastics and  
rubber are discussed. Standardized terms introduced by standards are  
explained and some practical recommendations are included. In German.

ID NO.- EI730838489 338489

ANWENDUNGSRICHTLINIEN UEBER DEN EINSATZ VON PLASTEN IM BAUWESEN.  
\$left bracket\$ Guidelines for the Use of Plastics in Construction  
\$right bracket\$ .

Hildebrand, Chr.

Institut fuer Baustoffe der Bauakademie der DDR, Leipzig, E Ger

Plaste Kaut v 20 n 5 May 1973 p 380 CODEN: PLKAAM

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (CONSTRUCTION  
INDUSTRY, East Germany),

CARD ALERT: 405, 415, 817

These are recommendations prepared by East German institutes of  
Building Materials for uses by designers in the building industry.  
Listing of guidelines includes 41 positions which are tabulated. In  
German.

ID NO.- EI730838488 338488

SCHNELLALTERUNG VON PLASTEN UNTER DEM ASPEKT DER AUSSENANWENDUNG DER MATERIALIEN IM BAUWESEN. \$left bracket\$ Accelerated Aging of Plastics in Regard to Their Use as Building Material in Outside Applications \$right bracket\$ .

Muth, T.

Institut fuer Baustoffe der Bauakademie der DDR, Leipzig, E Ger  
Plaste Kaut v 20 n 5 May 1973 p 365-367 CODEN: PLKAAM

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (PLASTICS, Aging),

CARD ALERT: 415, 421, 817

General remarks related to accelerated testing techniques, equipment used and evaluation of test data are followed by a presentation of weathering results obtained with the use of Xenotest apparatus type 450. Relations between accelerated test data and natural weathering results were established. Recommendations how to use Xenotest equipment and evaluate accelerated test results are given. 3 refs. In German.

ID NO. - EI730838487 338487

ACRYLIC FACED BATHROOM FIXTURES: PRODUCE FOR PROFIT!

Horner, A. H.

Swedlow, Inc, Garden Grove, Calif

SPE, Annu Tech Conf, 31st, Pap, Montreal, Que, May 7-10 1973, p 673-676

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), ACRYLICS, HOUSES, (PLASTICS PLANTS, Costs),

CARD ALERT: 402, 816, 817

This paper discusses the technological and economic aspects of the use of chemically crosslinked continuously cast acrylic sheet in bathroom fixtures applications. The following topics are detailed: product design; manufacturing plan and unit cost outline; layout of plant; vacuum forming; spray-up and roll-out (use of GFRP for providing structural integrity to the final product); check list for start-up; equipment and tooling; packaging and labeling; quality planning; safety; and trends. 4 refs.

ID NO.- EI730838486 338486

BERECHNUNG DER WAERME-AUSDEHNUNG UND DER DARAUS RESULTIERENDEN KRAEFTE AN THERMOPLASTBAUTEILEN. \$left bracket\$ Calculation of the Thermal Expansion and of Forces Resulting from It in Thermoplastic Structural Members \$right bracket\$ .

Kaufhold, R.

Zentralinstitut fuer Schweisstechnik, Halle, E Ger

Plaste Kaut v 20 n 4 Apr 1973 p 294-297 CODEN: PLKAAM

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), STRUCTURAL DESIGN, MATHEMATICAL TECHNIQUES,

CARD ALERT: 408, 415, 817, 921

The linear expansion of thermoplastic construction units under the action of temperature is described and the values required for equations valid for all materials are determined numerically. Conclusions are drawn to determine resulting stresses in the structural member if the expansion is impeded, and mathematical methods of universal validity are used to describe the forces acting on the fixed points. To conclude the U-equalizer of a pipeline serves to illustrate practical applications. The free length for designing the expansion of a pipeline changing its direction is also determined. 5 refs. In German.

ID NO. - EI730736314 336314

COMBUSTION PRODUCTS OF POLYMERIC MATERIALS CONTAINING NITROGEN IN THEIR CHEMICAL STRUCTURE.

Sumi, Kikuo; Tsuchiya, Yoshio  
National Res Council of Canada

J Fire Flammability v 4 Jan 1973 p 15-22 CODEN: JFFLAO

DESCRIPTORS: (\*POLYMERS, \*Combustion), (PLASTICS, Combustion),  
NITROGEN, COMBUSTION, AIR POLLUTION, (BUILDING MATERIALS, Plastics),

IDENTIFIERS: SMOKE INHALATION, HYDROGEN CYANIDE, FIRE HAZARDS, TOXIC  
GASES, COMBUSTION PRODUCTS

CARD ALERT: 815, 817, 914

Five materials that contain nitrogen were burned in a flask at 800 degrees C, and the amounts of hydrogen cyanide, carbon monoxide and carbon dioxide produced were quantitatively analyzed by gas chromatography. The harmful effects of these products to the resulting atmosphere were then evaluated. The results vividly illustrate the potential danger of HCN to a fire environment when materials containing nitrogen are involved in fire. 11 refs.

ID NO.- EI730733072 333072

CORNER FIRE TEST TO SIMULATE RESIDENTIAL FIRES.

Williamson, Robert Brady; Baron, Fred M.

Univ of Calif, Berkeley

J Fire Flammability v 4 Apr 1973 p 99-105 CODEN: JFFLAO

DESCRIPTORS: (\*BUILDINGS, \*Fire Protection), FIRE PROTECTION, (BUILDING MATERIALS, Plastics), (PLASTICS, Flammability), FLAME RESEARCH, (PAPER, Combustion),

IDENTIFIERS: FIRE PREVENTION, COMBUSTIBLE MATERIALS

CARD ALERT: 402, 914

Serious fires usually start in buildings with one small item in flames, such as a waste paper basket or chair, and then grow in size. The small fire which began with a single item eventually involves all other combustible items in an entire room if it is going to become a serious fire. On the other hand, it may just expend its fuel or lose its supply of fresh air and extinguish itself. Article describes a series of tests to determine the probability of this transition from small to large fire. 10 refs.



ID NO.- EI730733066 333066

DO-IT-YOURSELF BUILDS VOLUME FOR PLASTIC GLAZING.

Anon

Mod Plast v 50 n 6 Jun 1973 p 66-67 CODEN: MOPLAY

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), ACRYLICS, GLASS,

CARD ALERT: 415, 812, 817

This is a brief report on the growing market for acrylic resins in anti-vandalism applications, window replacement and in homecraft projects. Companies that have established formal marketing program to facilitate sales to consumers in local stores are listed.

ID NO.- EI730732726 332726

DURABILITE DU METAL PRELAQUE. \$left bracket\$ Durability of  
Prepainted Sheet Metal \$right bracket\$ .

Grisoni, J. C.

Rev Alum n 415 Feb 1973 p 129-135 CODEN: RALUAW

DESCRIPTORS: (\*ALUMINUM SHEET, \*Painting), (BUILDING MATERIALS,  
Aluminum),

CARD ALERT: 415, 535

Description of the features and advantages of the technological  
process of continuous sheet metal prepainting on special coating lines  
using various plastics-based paints. The technique is designed to  
improve the environmental protection of sheet metal used as  
construction material. Quality control problems and aging tests are  
also discussed. In French.

ID NO.- EI730630717 330717

OVERVIEW OF THE FIRE BEHAVIOR OF POLYMERS.

Hilado, Carlos J.

Union Carbide Corp, South Charleston, WVa

Am Chem Soc, Div Org Coatings Plast Chem, Prepr v 33 n 1. Pap for  
165th Meet, Dallas, Tex, Apr 8-13 1973 p 419-430 CODEN: ACWCAU

DESCRIPTORS: (\*PLASTICS, \*Flammability), (MATERIALS TESTING,  
Standards), (BUILDING MATERIALS, Plastics),

CARD ALERT: 415, 423, 817, 914

Thermal and oxidative properties of plastics are discussed in relation to legal requirements in the field of flammability and fire retardance as well as test procedures and their standardization. Extensive improvements related to fireproofing and flame retardation of plastics materials in various applications are pointed out with reference to bibliography data. In conclusion the author expressed his opinion that fire performance should be evaluated on the basis of full-scale fire tests involving the finished product in the environment of the proposed application, or on the basis of laboratory-scale tests which by comparative studies or long use experience correlate satisfactorily with full-scale tests. 84 refs.

ID NO.- EI730525410 325410  
ZERSTÖRUNGSFREIE PRÜFUNG VON PLASTBAUTEILEN \$EM DASH\$ EINE  
LITERATURUEBERSICHT. \$left bracket\$ Nondestructive Testing of  
Plastics Structural Components \$EM DASH\$ A Literature Review \$right  
bracket\$ .

Mueller, Regina

Bergmann-Borsig/Goerlitzer Maschinenbau, Berlin, E Ger

Plaste Kautsch v 20 n 1 Jan 1973 p 46-48

DESCRIPTORS: (\*PLASTICS, \*Testing), (MATERIALS TESTING,  
Nondestructive Testing), (BUILDING MATERIALS, Plastics),

CARD ALERT: 415, 421, 423, 817

In this survey of nondestructive techniques described in literature various methods are briefly described and evaluated from a designer's point of view. It is shown that ultrasonic test methods as well as x-ray analysis (also microwave testing) are the most promising techniques as far as reliability and reproducibility of evaluation are concerned. 10 refs. In German.

ID NO. - EI730522703 322703

GUMMI UND KINSTSTOFFE AUF DER BAU 72 IN MUENCHEN. \$left bracket\$ .  
Rubber and Plastics at the Construction Exhibition in Munich, 1972  
\$right bracket\$ .

Scheidegger, F.

Gummi, Asbest, Kunstst v 26 n 1 Jan 1973 p 28-30 CODEN: GAKSA2

DESCRIPTORS: (\*CONSTRUCTION INDUSTRY, \*Exhibitions), (EXHIBITIONS,  
West Germany), (BUILDING MATERIALS, Plastics), (SEALS, Rubber),

CARD ALERT: 402, 405, 619, 817, 818

In this report on the West German Exhibition of the building industry, a survey is given of various polymeric materials that have found application in construction. The following materials are discussed in some detail--seals, flexible profiles (sealants etc), nonflexible plastics semifabricated products such as PVC cladding, thermal insulating materials (polyurethane and PS foams), PVC floor coverings, and plastics and rubber films. Specialty plastics products used as building materials are also briefly reported. In German.

ID NO.- EI730522240 322240

RIGID CELLULAR PLASTIC WALL INSULATION.

Maroni, W. F.

Factory Mutual Res Corp, Norwood, Mass

Fire J v 66 n 6 Nov 1972 p 39-41, 43 CODEN: FIJOAU

DESCRIPTORS: (\*BUILDING MATERIALS, \*Fire Resistance), PLASTICS,  
FOAMED, (HEAT INSULATING MATERIALS, Plastics),

CARD ALERT: 413, 415, 817, 914

A series of tests was conducted to develop a method of accurately determining the fire hazard of building materials as it relates to wall and roof insulations; insulations used as an interior finish on walls or the underside of a roof, or both, insulation used in its exposed state or faced with some integral skin or structural coating; and insulation installed with or without automatic sprinkler protection.

ID NO.- EI730418572 318572

DES IDEES NOUVELLES POUR LE BATIMENT. \$left bracket\$ New Ideas in  
House Construction \$right bracket\$ .

Anon

Plast Mod Elastomeres v 24 n 9 Nov 1972 p 104-106 CODEN: PMELAW

DESCRIPTORS: (\*HOUSES, \*Plastics Applications), (PLASTICS INDUSTRY,  
Ireland), (BUILDING MATERIALS, Plastics),

CARD ALERT: 402, 415, 817

This is a description of a one-family house designed and built in  
Ireland in which many structural members employed were made of plastic  
materials. Design, material and techniques employed are dealt with in  
some detail. In French.

ID NO.- EI730314595 314595

DIE BEMESSUNG VON GUP-BAUKONSTRUKTIONEN NACH DER METHODE DER GRENZZUSTAENDE. \$left bracket\$ Design of GFRP Structural Members by Using the Method of Limiting States \$right bracket\$ .

Opitz, H.

Technische Universitaet, Dresden, E Ger

Plaste Kaut v 19 n 11 Nov 1972 p 827-829 CODEN: PLKAAM

DESCRIPTORS: (\*PLASTICS, REINFORCED, \*Mechanical Properties), (BUILDING MATERIALS, Testing), MATHEMATICAL TECHNIQUES,

CARD ALERT: 415, 421, 817, 921

In future, building constructions made of GFRP will be designed by the method of limiting states, for which arguments are given in some cases and early statements are made on factors occurring, in these arguments. The statements also apply to the technique of determining such factors. Research work must be carried on with a view to standardizing the technique of determining the factors in question, which adds to their knowledge and provides a relationship between results obtained by controlling and securing the quality during the production process and factors assumed during the calculation. 7 refs. In German.



ID NO.- EI730314594 314594

DAS ZEITABHAENGIGE TRAGVERHALTEN BESTIMMTER FLAECHENTRAGWERKE AUS  
GFP BEI STATISCHER BELASTUNG. \$left bracket\$ Time-Dependent  
Load-Carrying Behavior of Some Plane Structural Members Made of GRP  
Exposed to Static Stresses \$right bracket\$ .

Ackermann, G.; Beutner, M.

Bauakademie der DDR, E Ger

Plaste Kaut v 19 n 11 Nov 1972 p 820-826 CODEN: PLKAAM

DESCRIPTORS: (\*PLASTICS, REINFORCED, \*Mechanical Properties), (  
BUILDING MATERIALS, Testing), MATHEMATICAL TECHNIQUES,

CARD ALERT: 415, 421, 817, 921

Based on the linear theory of viscoelasticity the state of  
deformation and cutting force of boards and rotational bowls is  
investigated by the first-order theory, with a method of approximation  
used for the purpose. The results obtained for a definite polyester  
resin reinforced by glass mats are given in diagrammatic form, and  
permit to give a qualitative estimate of the influence exerted by the  
time dependence. 6 refs. In German.

ID NO.- EI730312946 312946

NEOPENTYL GLYCOL MAY BE A MOUTHFUL, BUT IN GEL COATS IT SMOOTHS THE WAY.

Anon

Mod Plast v 50 n 1 Jan 1973 p 70-72 CODEN: MOPLAY

DESCRIPTORS: \*GLYCOLS, (PROTECTIVE COATINGS, Plastics), BUILDING MATERIALS, SHIPBUILDING MATERIALS,

CARD ALERT: 415, 673, 804, 817

This is a report on recent developments in applications of neopentyl glycol (NPG)-based gel coats with emphasis on superior performance of this material in coatings. Examples are given of advantages achieved with new gel coats in boat building, construction building and automotive industries.

ID NO.- EI730311350 311350

BEITRAG ZUR KONSTRUKTION VON BAUTEILEN AUS VERSTAERKTEN PLASTEN.  
\$left bracket\$ Contribution to Design of Structural Members in  
Reinforced Plastics \$right bracket\$ .

Knauer, B.

Climax Molybdenum Co, Colo

Plaste Kaut v 19 n 11 Nov 1972 p 809-814 CODEN: PLKAAM

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (PLASTICS, REINFORCED  
, Mechanical Properties),

CARD ALERT: 402, 415, 421, 817

Graphical and mathematical methods are described that have been used to show the way in which the properties of structural parts made of composite materials are affected and modified by each of components, in order to achieve better control in designing considerations. The rheonomic behavior of materials is considered when designing component parts and when demonstrating their reliability. Two new constructions made by the methods described are presented. 11 refs. In German.

ID NO. - EI730311349 311349

BYGGELEMENT I PLAST. \$left bracket\$ Components and Composites  
\$left bracket\$ .

McRoberts, T. S.; Salmons, R. F.

Shell Int Chemical Co, Swed

Plastvarlden n 11 Nov 1972 p 40, 42, 44 CODEN: PLTVAS

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), PLASTICS, REINFORCED,  
PLASTICS, FOAMED, COMPOSITE MATERIALS,

CARD ALERT: 402, 415, 816, 817

General considerations related to the use of plastics in buildings as composite materials are followed by description of a method developed by Shell for the manufacture of building blocks and other moldings of reinforced urethane foam. The method is claimed to offer a number of advantages compared to previous methods. Reduced density and reduced pressure against the mold walls gives lower mold costs. The process, which is a one step operation, also ensures higher homogeneity and a greater consistency of a uniform product. Economic aspect is also discussed in this report. In Swedish with English abstract.

ID NO.- EI730311348 311348

POLYMERIC MATERIALS IN LIGHT BUILDING STRUCTURES.

Kulagin, A. Ya.

Sov Plast n 6 1972 p 33-34 CODEN: SOPLAW

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (PLASTICS INDUSTRY, Soviet Union),

CARD ALERT: 415, 817

Technical and economic aspects are discussed which dealt with the new approach to design of buildings expressed on the use of light building structures, such as suspended walls. In this survey of the Soviet building industry particular attention is given to the use of plastics foam and sandwich panels. 3 refs.

PLASTICS IN BUILDING AND ARCHITECTURE OF THE FUTURE.

Airapetov, D. P.

Sov Plast n 6 1972 p 27-32 CODEN: SOPLAW

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (PLASTICS INDUSTRY, Soviet Union), (BUILDINGS, Plastics Applications),

CARD ALERT: 402, 415, 817

A lengthy survey is presented which comprehensively describes plastics application in the Soviet construction building and furniture industries. The following plastics materials are discussed SEM DASH\$ roll-form and tile materials for floor covering (PVC, rubber, alkyd, coumarone, synthetic, pile fabric, etc. ); mastic compositions for floors in factories and public buildings; wall covering materials based on PVC and other materials for interior decoration of buildings; mineral wool articles based on a synthetic binder, and porous plastics for the insulation of building structures and ducts (phenolic, polystyrene, polyurethane etc. ); acoustic (sound-absorbent) sheet and tiles; hydroinsulating and roofing material, building sealants; sheet and roll-form translucent GFRP; sections and trim (handrails etc. ); toilet articles and equipment and tubes and fittings for these; bonding agents and mastics. Some examples of all-plastics buildings from abroad are included. 10 refs.

ID NO.- EI730209102 309102

ERGEBNISSE UND SCHLUSSFOLGERUNGEN VON BRANDVERSUCHEN AN  
WANDELEMENTEN AUS ODER UNTER VERWENDUNG VON PLASTEN. \$left bracket\$  
Results and Conclusions of Flammability Tests Performed on Wall  
Structural Members Made of or with Plastics \$right bracket\$ .

Hildebrand, Chr.

Institut fuer Baustoffe der Bauakademie der DDR, Leipzig, E Ger

Plaste Kaut v 19 n 10 Oct 1972 p 773-777 CODEN: PLKAAM

DESCRIPTORS: (\*PLASTICS, \*Flammability), (BUILDINGS, Walls), (  
BUILDING MATERIALS, Testing),

CARD ALERT: 402, 415, 423, 817

Exerimental data are presented which have been obtained in a series  
of flammability tests carried out in East Germany on structural  
elements designed for wall construction and made of plastics.  
Particular attention was given to sandwich structures made of GFRP  
skin and foam core. Recommendation for grading of various plastics  
building materials in relation to their flame resistance are included  
in this report. In German.

ID NO.- EI730209101 309101

ERGEBNISSE UND SCHLUSSFOLGERUNGEN VON BRANDVERSUCHEN AN  
DACHDECKUNGEN AUS ODER UNTER VERWENDUNG VON PLASTEN. \$left bracket\$  
Results and Conclusions of Flammability Tests Performed on Roof  
Coverings Made of/with Plastics \$right bracket\$ .

Suess, W.

Institut fuer Baustoffe der Bauakademie der DDR, Leipzig, E Ger

Plaste Kaut v 19 n 10 Oct 1972 p 771-773 CODEN: PLKAAM

DESCRIPTORS: (\*PLASTICS, \*Flammability), (ROOFS, Coverings), (  
BUILDING MATERIALS, Testing),

CARD ALERT: 402, 415, 423, 817

Results are presented which have been obtained in a series of  
flammability tests performed in East Germany on the following building  
materials used in roofing applications \$EM DASH\$  
ethylene-propylene-terpolymer film; chloroprene rubber film; and,  
for comparison, conventional roofing pasteboard. Recommendations for  
practical uses are given. In German.



ID NO.- EI730205967 305967

NEW BUILDING CLADDING.

Anon

Europlastics v 45 n 11 Nov 1972 p 75

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (POLYVINYL CHLORIDE, Extrusion),

CARD ALERT: 402, 816, 817

This is a brief report on a PVC shiplap cladding system which has been developed in the United Kingdom. Three profiles, which are extruded from high impact unplasticized, UV-stabilized PVC, are available, two of them designed for horizontal installations while the third is produced for vertical and ceiling applications. Price picture is presented; properties of claddings are tabulated.

ID NO.- EI730105365 305365  
BRIGHT FUTURE FOR GLAZING PLASTICS.

Sherr, Allan E.

Am Cyanamid Co, Bound Brook, NJ

SPE J v 28 n 11 Nov 1972 p 24-30 CODEN: SPEJAC

DESCRIPTORS: (\*WINDOWS, \*Plastics), BUILDING MATERIALS, ACRYLICS,  
POLYCARBONATES,

CARD ALERT: 415, 817

A review of plastics used for glazing describes the properties of acrylics, polycarbonates, PVC, and polyesters. There is also a discussion of some of the newer developments on plastic window materials, including near-infrared-absorbing sheets, solar control panels, heat-reflecting sheet, and mar-resistant surfaces. Extensive property data are tabulated and plotted in curves. 16 refs.

ID NO.- EI730103817 303817

BITUMENGETRAENKTE POLYURETHAN-WEICHSCHAUM-DICHTUNGSBAENDER. \$left  
bracket\$ Sealing Tapes of Flexible Polyurethane Foam Impregnated with  
Bitumen \$right bracket\$ .

Hegemann, F.

Plaste Kaut v 19 n 9 Sep 1972 p 688-691 CODEN: PLKAAM

DESCRIPTORS: (\*POLYURETHANE RESINS, \*Foam), PLASTICS, FOAMED,  
BITUMINOUS MATERIALS, (BUILDING MATERIALS, Sealants),

CARD ALERT: 411, 415, 817

A brief report on practical applications of sealants under consideration in the East German construction industry is followed by a description of new impregnating systems which exhibit improved properties. Particular attention is given effects of various additives which make sealants resistant to weathering and low temperatures. Material characteristics of commercially available sealing tapes are discussed and economic aspect is also dealt with. 10 refs. In German.

ID NO. - EI730103632 303632

VORGABE UND NACHKONTROLLE KRITISCHER DEHNUNGEN IN DER ANWENDUNG AUF THERMOPLASTISCHE BAUTEILE \$EM DASH\$ 4. ENFLUSS VON ORIENTIERUNGS- UND EIGENSPANNUNGSZUSTAENDEN. \$left bracket\$ Points Given and Control of Critical Strains Applied in Thermoplastics Structural Members \$EM DASH\$ 4. Effect of Orientation and Internal Stress Conditions \$right bracket\$ .

Pohrt, J.

BASF, Ludwigshafen/Rhein, Ger

Gummi, Asbest, Kunstst v 25 n 8 Aug 1972, 4 p between p 754 and 759

CODEN: GAKSA2

DESCRIPTORS: (\*PLASTICS, \*Testing), (MATERIALS TESTING, Residual Stresses), (BUILDING MATERIALS, Plastics), (PLASTICS, Elasticity),

CARD ALERT: 415, 421, 817

In this continuation of an article series on testing of thermoplastics used in building applications, the author describes the dependence of critical strain values of plastics structural members on the degree and direction of orientation and of the energy of elastic residual stresses in samples tested. Results of test program are presented and compared with literature data. 20 refs. In German.

ID NO.- EI730103631 303631

VORGABE UND NACHKONTROLLE KRITISCHER DEHNUNGEN IN DER ANWENDUNG AUF  
THERMOPLASTISCHE BAUTEILE \$EM DASH\$ 4. \$left bracket\$ Points Given  
and Control of Critical Strains Applied in Thermoplastics Structural  
Members \$EM DASH\$ 4 \$right bracket\$ .

Pohrt, J.

BASF, Ludwigshafen/Rhein, Ger

Gummi, Asbest, Kunstst v 25 n 9 Sep 1972 5 p between p 854 and 861

CODEN: GAKSA2

DESCRIPTORS: (\*PLASTICS, \*Testing), (MATERIALS TESTING, Impact), (BUILDING MATERIALS, Plastics),

CARD ALERT: 415, 421, 817

In this continuation of an article series the following topics are discussed \$EM DASH\$ crack formation limits of monoaxial stretched sheets made of PS with various molecular weight; and differentiation of impact PS grades with various kinds of orientation in regard to crack formation and critical strain. It is shown that crack propagation takes place only after excessing critical stress limit which depends on the degree of stretching and molecular weight of impact PS. 3 refs. In German.

ID NO.- EI730103552 303552

PLASTICS PIPING ROLLS FORWARD IN BUILDING INDUSTRY.

Durazo, Raymond

Plastics Pipe Inst, New York, NY

SPE'J v 28 n 11 Nov 1972 p 31-33 CODEN: SPEJAC

DESCRIPTORS: \*PIPE, PLASTIC, BUILDING MATERIALS,

CARD ALERT: 415, 619, 817

The largest single application of plastics in the construction industry today is in piping: water and natural gas distributions; drain, waste, and vent (DWV); irrigation; chemical waste and process. The most common materials used in this application are ABS, polybutylene, PE, and PP. Several examples of plastics pipe applications are illustrated. Code approval considerations are included.

ID NO.- EI730102092 302092

BUILDING INSULATION ROUNDUP.

Anderson, H. E. B. (Ed. )

Plant Eng (Barrington, Ill) v 26 n 21 Oct 19 1972 p 75-78 CODEN:

PLENAV

DESCRIPTORS: \*HEAT INSULATING MATERIALS, GLASS FIBER, PLASTICS,  
FOAMED, BUILDING MATERIALS,

CARD ALERT: 413, 817

The various available forms, properties and installation procedures for fibrous and foamed glass, foamed plastics, lightweight aggregate for poured concrete and insulating mastics and insulating dry fill for walls, are described. Urethane is the most efficient insulator, is highly versatile and offers the lowest thermal conductivity of any commercial insulating material.

ID NO. - EI730100492 300492  
DURABILITY OF PLASTICS MATERIALS.

Fougea, D.

Build Int (Engl Ed) v 5 n 5 Sep-Oct 1972 p 296-301 CODEN: BLINBY

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics),

CARD ALERT: 817

In Grenoble, France, laboratory for testing the physical properties of building materials, an investigation into the durability of plastics was one of the main projects. The author gives a review of the results obtained. Tabulated data on the changes in some of the properties of plastics after natural exposure. The values given are percentages of the values measured on the same material when new. 9 refs.



ID NO.- EI730100491 300491

GROWING ROLE OF POLYESTER IN CONSTRUCTION.

Fusco, Anthony D.

Hooker Chemical Corp, N. Tonawanda, NY

SPE J v 28 n 11 Nov 1972 p 41-43 CODEN: SPEJAC

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), POLYESTERS, PLASTICS, REINFORCED,

CARD ALERT: 415, 817

A broad survey of products for the construction industry, which represents the fastest growing market using specialized polyester resins, ranges from bathing modules to schools for Eskimos. It also covers applications in which polyesters and conventional building materials are effectively combined.

ID NO. - EI730100490 300490  
PLASTICS RESCUE VANDALIZED DWELLING.

Williams, James G.

Cleveland Home Repair Co, Ohio

SPF J v 28 n 11 Nov 1972 p 34-36 CODEN: SPEJAC

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), BUILDINGS,  
MAINTENANCE,

CARD ALERT: 402, 415, 817, 913

A case history of the rehabilitation of a vandalized but structurally sound single-family dwelling cites the advantages of using plastic materials in six key areas; replacement windows, plumbing, siding, interior trim, flooring, and wall surfacing. A significant advantage was that of using semiskilled or unskilled workers in most instances.

ID NO. - EI730100489 300489

VITAL STATISTICS OF RIGID PVC SIDING.

Weaver, Leonard W.

Bird & Sons, Inc, East Walpole, Mass

SPE J v 28 n 11 Nov 1972 p 18-20 CODEN: SPEJAC

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), POLYVINYL CHLORIDE, (BUILDINGS, Facings),

CARD ALERT: 402, 415, 817

Since its introduction in 1963, rigid vinyl siding has become well established as an exterior cladding, primarily for recover work. It is, however, quite suitable fvor new construction. White and a variety of pastel shades predominate, since dark colors would militate toward the thermal susceptibility of the vinyl compounds and tend to fade on weathering. Several aspects of PVC siding application are discussed in some detail.

ID NO. - EI730100488 300488

EVALUATING PLASTICS AS A BUILDING MATERIAL.

Macdonald, W. Douglas

Champion Int, Brewster, NY

SPE J v 28 n 11 Nov 1972 p 14-17 CODEN: SPEJAC

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (PLASTICS, Testing),  
MATERIALS TESTING,

CARD ALERT: 415, 421, 817

Test procedures covering the basic chemical and physical properties of plastic materials are insufficient to evaluate their suitability as building materials. Suitability of plastic materials for construction purposes requires production of prototype composite items as proposed for use and test of these items for all requirements of building use including long-term durability, complying with code requirements, \$left double quote\$ cost in place \$right double quote\$ in finished construction, and suitability for normal construction practices. Philosophy of testing to meet these requirements, choice of test methods, and interpretation of results are touched upon.

ID NO. - EI730100487 300487  
SHUTTER MARKET OPENS TO PS FOAM.

Anon

Mod Plast v 49 n 11 Nov 1972 p 73 CODEN: MOPLAY

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (POLYSTYRENES, Foam),  
(PLASTICS, FOAMED, Molding), HOUSES,

CARD ALERT: 415, 816, 817

This is a brief report on the development of open-louvered shutters with the look and feel of wood which offer high resistance to weathering and low maintenance at competitive cost. Two production methods employed are detailed. In both systems, shutter is first injection molded of structural PS foam, and then spray coated with acrylic paint to provide UV protection. Market considerations are included.

ID NO.- EI721320987 298984

WORLD'S FIRST SOFT BATHROOM.

Winfield, Armand G.

Armand G. Winfield Inc, West Babylon, NY

J Cell Plast v 8 n 5 Sep-Oct 1972 p 250-255 CODEN: JCUPAM

DESCRIPTORS: (\*PLASTICS, FOAMED, \*Structural Applications), (BUILDING MATERIALS, plastics), PLUMBING,

CARD ALERT: 402, 619, 817

This is presentation of case history which describes step-by-step research and development work aimed at a \$left double quote\$ soft bathroom \$right double quote\$ to eliminate death and health hazard connected with conventionally designed \$left double quote\$ rigid \$right double quote\$ bathroom. The following steps are discussed in detail--feasibility; evaluation; testing; foam selection; prototype development; and past testing. The soft bathroom concept is shown to provide an environment that is functional, practical, economical and pristine in its simplicity of line. It has extensive and widespread implications much too important to judge at this time.

ID NO. - EI721320434 298431

DE TOEPASSING VAN KUNSTSTOFFEN IN SANITAIRE INSTALLATIES.  
ONTWIKKELING EN TECHNIEK. \$left bracket\$ Use of Plastics in Plumbing  
Applications \$EM DASH\$ Development and Techniques \$right bracket\$ .

Kroeze, H. K.

Wavin Nederland bv, Hardenberg

Plastica v 25 n 9 Sept 1972 p 377-386 CODEN: PLASAQ

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), POLYVINYL CHLORIDE,  
PLUMBING,

CARD ALERT: 415, 619, 817

After the quick growth in the use of plastics, especially PVC, in sanitary installations, problems arose connected with the rapid increase in domestic hot water wastes. New plastics were sought to solve these problems. Besides this, there were successful efforts to improve the material properties and design of PVC products. In addition, more attention was paid to proper use of the material as well as to standardizations. Major developments now taking place are: reduction of variety; design of fittings so that rapid and reliable installation is possible; and a construction of the piping system that it operates reliably even with wide and frequent temperature fluctuations. In Dutch with English abstract.

ID NO.- EI721319797 297794

PREDICTING LIMITS FOR SAFE APPLICATION OF COMBUSTIBLE MATERIALS.

Hilado, C. J.

Union Carbide Corp, South Charleston, WVa

ASTM Spec Tech Publ 502, 1972 p 112-118 CODEN: ASTTA8

DESCRIPTORS: (\*BUILDING MATERIALS, \*Fire Resistance), (MATERIALS, Fire Resistance), (PLASTICS, Flammability),

IDENTIFIERS: PYROLYTIC GASES

CARD ALERT: 415, 914

Limits for safe application of combustible materials can be calculated on the basis of the performance characteristics of the materials and the response characteristics of the systems in which they are employed. The calculation required is a function of the criterion selected as a determinant of hazard. When the concentration of flammable volatiles or combustion products is the criterion of safety, calculations require material balances involving quantity of material, rate of evolution, and degree of ventilation. 5 refs.



ID NO.- EI721319790 297787

CODE OFFICIAL'S VIEW OF REQUIREMENTS FOR NONCOMBUSTIBLE BUILDING MATERIALS.

Bihr, J. E.

Int Conference of Building Officials, Whittier, Calif

ASTM Spec Tech Publ 502, 1972 p 3-10 CODEN: ASTTA8

DESCRIPTORS: (\*BUILDING MATERIALS, \*Fire Resistance), BUILDING CODES

IDENTIFIERS: FIRE TESTS

CARD ALERT: 402, 415, 902, 914

The traditional definition of noncombustible has given way to a performance oriented approach. Comparing the various model code treatments, it is apparent that they are leading this trend. The motivation stems from the development of new products such as plastics and composites as well as the ability to significantly change the combustible characteristics of older products such as wood. Potential heat tests appear to be a realistic method of separating materials with respect to levels of combustibility.

ID NO. - EI721317909 295908

KUNSTSTOFFE AUF DER BAU '72 IN MUENCHEN. \$left bracket\$ Plastics  
in Buildings '72, Munich \$right bracket\$ .

Anon

Kunststoffe v 62 n 7 Jul 1972 p 446-448 CODEN: KUNSAV

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (EXHIBITIONS, West  
Germany), (BUILDINGS, Plastics Applications),

CARD ALERT: 402, 415, 817, 911

This is a brief description of several new plastics applications in  
construction industry as shown at the Building Exhibition in West  
Germany. The following applications are discussed \$EM DASH\$ roofing,  
external walls, window frames, and building place protection. In  
German.

ID NO. - EI721316780 294779

PLASTICS ARE ROLLING INTO LOW-COST HOUSING VIA THE MOBILE HOME ROUTE.

Anon

Mod Plast v 49 n 6 Jun 1972 p 58-61 CODEN: MOPLAY

DESCRIPTORS: (\*HOUSES, \*Mobile), BUILDING MATERIALS, PLASTICS,

CARD ALERT: 402, 415, 817

This is a comprehensive review of the mobile home developments in regard to applications of plastics materials. In 1971 approximately 240 lb. of plastics went into each of an estimated 485,000 complete homes, putting the mobile home industry in the first place for plastics consumption in the single-family housing market. Total consumption was posted at 55,000 tons.

ID NO.- EI721316759 294758

FESTSTELLUNG DES LANGZEITVERHALTENS EINGEBAUTER KUNSTSTOFFERZEUGNISSE  
AM AEUSSEREN VON GEBAEUDEN \$EM DASH\$ 2. \$left bracket\$ Examination  
of the Long-term Behavior of Plastics Parts Used in Outer Structural  
Members of Buildings \$EM DASH\$ 2 \$right bracket\$ .

Schwabe, A.

Institut fuer das Bauen mit Kunststoffen, Darmstadt, Ger

Kunstst-Plast v 19 n 4 1972 p 141-145 CODEN: KUPLAK

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (PLASTICS, Weathering

),

CARD ALERT: 415, 817

In this continuation and conclusion of a report on results of the inspection of buildings with plastics parts in West Germany, the following applications of plastics are discussed \$EM DASH\$ roofing, skylight cupolas, lighting walls, lighting wall elements, windows and various profiles and moldings. A summary of the conclusion is presented and some recommendations for practical uses are included. In German.

ID NO. - EI721214497 292496

NATURAL AND ARTIFICIAL WEATHERING PERFORMANCE OF RIGID POLYVINYL CHLORIDE (PVC) AND OTHER PLASTIC MATERIALS.

Stedman, Harold F.

Bird & Son, Inc, East Walpole, Mass

Natl Bur Stand, Spec Publ n 361 v 1, 1972 p 751-760 CODEN: XNBSAV

DESCRIPTORS: \*BUILDING MATERIALS, (CONCRETE CONSTRUCTION, Plastics Applications), POLYVINYL CHLORIDE,

IDENTIFIERS: YELLOWING, IMPACT RESISTANCE

CARD ALERT: 405, 816, 817

An artificial weathering test method has been developed which takes into account the vital role of moisture in the degradation of ultraviolet radiation alone. Many of the results of this combined method of evaluation have correlated well on an accelerated basis with outdoor performance. The efficacy of outdoor weathering emphasizes the need for a closer examination of UV radiation sources and test atmospheres. Color acceptability may be evaluated by means of color triangulation. Changes in impact resistance in rigid PVC are as important as the influence of atmospheric pollutants during the natural weathering process. Both phenomena require duplication artificially with the hope of determining time equivalence between the two media. 12 refs.

ID NO.- EI721213305 291304

PROGRESS IN CONSTRUCTION SCIENCE AND TECHNOLOGY.

Burgess, Roger A.; Horrobin, Peter J.; Simpson, John W.; Parbrook, H. Derrick; Mulholland, Kenneth A.; Deitz, Albert, G. H.; Page, John K.; Maver, Thomas W.; Ashton, H. E.; Elvery, Robert H.; Forrester, J. A.; Saini, Balwant Singh; Malhotra, H. L.; Pauw, Adrian

Progress in Construction Science and Technology Barnes & Noble, New York, 1971, 322 p

DESCRIPTORS: \*CONSTRUCTION INDUSTRY, BUILDINGS, BUILDING MATERIALS, CONCRETE CONSTRUCTION,

IDENTIFIERS: PARTITIONS

CARD ALERT: 402, 405

The book contains 9 papers presenting reviews on aspects of construction science and technology which have application in the many divisions of the construction industry. Following is the list of 9 papers presented. Sound Insulation of Partitions. By H. Derrick Parbrook and Kenneth A. Mulholland. Plastics and Plastics-Based Composites. By Albert G. H. Dietz. Weather as a Factor in Building Design and Construction. By John K. Page. The Computer as an Aid to Architectural Design: Present and Future. By Thomas W. Maver. The Weathering of Organic Building Materials. By H. E. Ashton. Non-destructive Testing of Concrete. By Robert H. Elvery and J. A. Forrester. Building in Hot Climates. By Balwant Singh Saini. Principles of Structural Fire-Resistance. By H. L. Malhotra. Structural Lightweight Aggregate Concrete. By Adrian Pauw.

ID NO. - EI721213105 291104

Dietz, A. G. H.

Massachusetts Inst of Technol

Composite v 3 n 4 Jul 1972 p 181-185

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), COMPOSITE MATERIALS, PLASTICS, REINFORCED,

CARD ALERT: 415, 817

Report on international symposium held at Copenhagen and devoted to the examination of the probable future role of plastics in general in building, with particular attention paid to composite materials based on plastics. From 13 papers presented, three of them are discussed in some detail. Titles of all papers are listed.

ID NO.- EI721212642 290641

KUNSTSTOFFE IM BAUWESEN. \$left bracket\$ Plastics in Construction  
\$right bracket\$ .

Anon

Gummi, Asbest, Kunstst v 25 n 6 Jun 1972, 9 p between p 586-597  
CODEN: GAKSA2

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (BUILDINGS, Plastics  
Applications),

CARD ALERT: 402, 415, 817

This is a review of the state-of-the-art of plastics applications in  
houses and industrial buildings. Brief report on some examples of  
all-plastics houses is followed by detailed discussion of the plastics  
uses in building materials, building structural members, plumbing and  
heating furniture manufacture, window frames, house cladding, etc.  
Plastics in bridges and road surfaces are also dealt with. 7 refs.  
In German.



ID NO. - EI721110276 288275

PERFORMANCE CONCEPT APPLIED TO BUILDING MATERIALS SEM DASH\$ AN  
UNATTAINABLE IDEAL.

Blakey, P. A.; Martin, K. G.

Commonwealth Scientific and Industrial Res Organization, Melbourne,  
Natl Bur Stand, Spec Publ n 361 v 1, 1972 p 733-740 CODEN: XNBSAV

DESCRIPTORS: \*BUILDING MATERIALS, (CONCRETE CONSTRUCTION, Plastics  
Applications), CONCRETE, CONCRETE TESTING,

IDENTIFIERS: PERFORMANCE CONCEPT, PRESCRIPTION SPECIFICATION

CARD ALERT: 405, 412, 421, 817

In view of the examples to be cited, it is proposed that there  
should be a widespread return to prescription specifications to  
complement quality and valid performance property testing. The tests  
needed to police a prescription specification are usually simpler and  
quicker to carry out than performance tests and are equally  
satisfactory for control of uniformity. 10 refs.

ID NO.- EI721109900 287899

TALLEST BLOCK BEARING WALL STRUCTURE USES EPOXY MORTAR.

Anon

Eng News-Rec v 189 n 1 Jul 6 1972, 8 p between p 23 and 40 CODEN:

ENREAU

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (BUILDINGS, Walls),  
EPOXY RESINS, MORTAR,

IDENTIFIERS: BLOCK BEARING WALLS

CARD ALERT: 402, 412, 817

A 196-ft-high hotel designed to withstand hurricane winds of 120 mph, uses an epoxy adhesive instead of conventional mortar. Originally conceived as a reinforced concrete structure, it was redesigned as a load-bearing concrete block building, using Threadline, a recently developed epoxy adhesive mortar made by Dow Chemical Co, Midland, Mich.

ID NO.- EI721109715 287714

SANDWICH MATERIALS.

Milner, Basil

Sheet Met Ind v 49 n 7 Jul 1972 p 454-456

DESCRIPTORS: \*LAMINATED PRODUCTS, METAL CLADDING, COMPOSITE MATERIALS, SANDWICH STRUCTURES, SHEET AND STRIP METAL, BUILDING MATERIALS,

CARD ALERT: 413, 415

The use of prefinished sheet, colored or galvanized on one side and untreated sheet in clad metal construction is described. Bonding methods, plastics and insulating materials and performance properties are also included.

ID NO.- EI721108154 286153

6. INTERNATIONALE KUNSTSTOFFMESSE K '71 IN DUSSELDORF. \$left bracket\$ Sixth International Plastics Fair K'71 in West Germany \$right bracket\$ .

Haase, H.

Gummi, Asbest, Kunstst v 25 n 6 Jun 1972, 7 p between p 560 and 602  
CODEN: GAKSA2

DESCRIPTORS: (\*PLASTICS INDUSTRY, \*Exhibitions), EXHIBITIONS, (BUILDING MATERIALS, Plastics), (AUTOMOBILE MATERIALS, Plastics),

CARD ALERT: 415, 662, 817

In this continuation and conclusion of a report series, a comprehensive survey is presented of advances in plastics applications. Detailed discussion includes several building systems using plastics as basic materials, various constructional applications as well as plastics uses in automotive, chemical equipment and mechanical engineering. Many items are illustrated by photographs. In German.

ID NO.- EI721107921 285920

MUESSEN WAENDE UND DECKEN ABSORPTIONSFAEHIG FUER WASSERDAMPF SEIN?  
\$left bracket\$ Should Walls and Ceilings be Absorbable Toward Water  
Vapor? \$right bracket\$ .

Kuenzel, H.

Institut fuer Bauphysik, Stuttgart, Ger

Kunstst-Plast v 19 n 6 1972, 4 p between 231-235 CODEN: KUPLAK

DESCRIPTORS: (\*BUILDING MATERIALS, \*Testing), (MATERIALS TESTING,  
Moisture Determination), ABSORPTION, ATMOSPHERIC HUMIDITY,

CARD ALERT: 415, 421, 802, 817

Results are given of an experimental study carried out in West  
Germany, in which air humidity conditions were investigated for  
various types of materials used in walls and ceilings. Water vapor  
absorbitive materials as used in conventional buildings were compared  
with plastics and aluminum. Comprehensive results are discussed in  
terms of practical considerations. 2 refs. In German.

ID NO.- EI721107518 285517

PLASTICS AND OTHER POLYMERS IN BUILDING.

Skeist, Irving; Miron, Jerry

Skeist Lab, Inc, Livingston, NJ

Reviews in Polymer Technology, v 1, 1972 Marcel Dekker, 1972, p 97-11

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (HOUSES, PLastics Applications),

CARD ALERT: 402, 817

Statistical data related to the use of plastics in building applications, domestic and abroad, are followed by a description of development of housing units in relation to the \$left double quote\$ Operation Breakthrough.\$right double quote\$ of HUD. Several systems of low-cost housing one-family homes are reported and evaluated with particular attention to modular constructions and preassembled plumbing units. Mobile homes are included in this review. 15 refs.

ID NO.- EI721106940

284939

DIMENSIONIERUNG VON SCHWINGEND MEHRACHSIG BEANSPRUCHTEN  
KUNSTSTOFFTEILEN. \$left bracket\$ Dimensioning of Cyclically and  
Multiaxially Stressed Structures Made of Plastics \$right bracket\$ .

Menges, G.; Alf, E.

Technische Hochschule, Aachen, Ger

Materialpruefung v 14 n 6 Jun 1972 p 193-200 CODEN: MTPRAJ

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics),

CARD ALERT: 415, 817

A simple and safe method for calculating permissible stresses, based on limits of permissible deformation, is presented. When these limits are exceeded crazes are formed in amorphous, and microcracks in semicrystalline thermoplastics. This is followed more or less rapidly by ultimate failure. The deformation limits are characteristic materials data, independent of time and temperature. They are influenced neither by distribution of stress (uniaxial, multiaxial) nor by kind of stress (static, alternating). In case of fatigue stress, the heating-up of plastics as a result of mechanical damping of the material must be taken into consideration as a second critical material characteristic. 27 refs. In German.

ID NO.- EI721002592 280591

SELECTING AND SPECIFYING PLASTICS PIPE FOR BUILDING CONSTRUCTION.

Rosen, Harold J.

Constr Specifier v 25 n 6 Jun 1972 p 50-54 CODEN: COSPAJ

DESCRIPTORS: (\*PIPELINES, \*Plastics Applications), (BUILDING MATERIALS, Plastics),

CARD ALERT: 619, 817

A review of types of plastics used in plumbing standards code acceptance, and properties are presented for specifiers concerned with the proper specifying of plastics pipe in building construction.



ID NO.- EI721002591 280590

REINFORCED PLASTIC/COMPOSITES FROM BASICS TO BUILDINGS.

Paulus, Harry J.

Constr Specifier v 25 n 6 Jun 1972 p 43-49 CODEN: COSPAJ

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), PLASTICS, REINFORCED,  
CARD ALERT: 415, 817

A comprehensive discussion on reinforced plastics composites is presented to aid specifiers for the proper selection of plastics as the creative products in construction. Plastics are defined by generic group and fabricating processes.

ID NO.- EI721002590 280589

PLASTICS IN ARCHITECTURE: THE FUTURE IN PROGRESS.

Durazzo, Ray

Constr Specifier v 25 n 6 Jun 1972 p 39-41 CODEN: COSPAJ

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), ARCHITECTURE, PLASTICS,

CARD ALERT: 402, 415, 817

An industry review of the history and development of plastic, its acceptance and design potential, in the building industry. The author discusses the potential of plastics and the problem of coping with archaic building codes.

ID NO.- EI721000750 278750

WHY NOT PLASTICS BRIDGES?

McCormick, Fred C.

Univ of Virginia, Charlottesville

ASCE J Struct Div v 98 n ST8 Aug 1972 Pap n 9143 p 1757-1767

CODEN: JSDEAG

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), FOOTBRIDGES,  
STRUCTURAL DESIGN, PLASTICS, REINFORCED,

CARD ALERT: 401, 817

Design examples of two 24. 4 m span, posttensioned structural  
plastic bridges for pedestrians are presented and compared with  
similar bridges built with steel and concrete and aluminum. 13 refs.

ID NO.- EI72X076939 276939

Role of rigid foam layers as sound insulation in apartment houses,  
(Die Bedeutung von Hartschaum- Daemmschichten fuer den Schallschutz im  
Hochbau)

EISENBERG A

Kunstst-Plast v 17 n 11 1970 p 455 CODEN: KUPLA

DESCRIPTORS: (\*PLASTICS, \*Cellular), (BUILDING MATERIALS, plastics),  
(SOUND INSULATING MATERIALS, Plastics),

CARD ALERT: 413, 751, 817

Use of cellular plastics as damping materials in construction  
building is briefly described and insulating properties of  
commercially available foams in thermal and soundproofing applications  
are discussed. In German.

ID NO.- EI72X076934 276934

Eternal dream for all- plastic house, (Der weige Traum vom Kunststoffhaus)

SCHWABE A

Kunstst-Plast v 17 n 12 1970 p 495-7 CODEN: KUPLA

DESCRIPTORS: (\*BUILDINGS, \*Plastics Applications), (BUILDINGS, Prefabricated), (PLASTICS, Reinforced), (BUILDING MATERIALS, Plastics)

CARD ALERT: 402, 415, 817

This article presents some new considerations, based on recently gained experience from practice, related to design concepts, material used, performance, testing procedure, etc. Modular construction, based on glass fiber reinforced polyester prefabricated building components, seems to take a lead among many other concepts. Particularly, a multistory building is described which consists of many space cells joined together in one entity. Every cell constitutes a separate small house which is aimed to perform as a one- family dwelling. In german.

ID NO. - EI72X057615 257615

Plastics applied

Appl Plast v 14 n 6 Dec 1971 p 17-19 CODEN: APTCA

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics),

CARD ALERT: 415, 817

Constructional and engineering applications of plastics is reported under the following headings- concrete and plastics flotation units; fencing for airport; farm building insulation; flywheel cover prevents accidents; laminates cut building industry's lost man-hours; acrylics in exhibition; half-a-million heads worth saving; and plastic spheres for novel display.

ID NO.- EI72X056288 256288

Plastics in building and construction. Eighth annual, Washington State Univ, Pacific Northwest, Plastics Conference, July 7- 9 1971, Pullman, sponsored by College of Engineering Research Div, and Engineering Extension Service

CONF

Washington State Univ, Pullman, 1971, 253 p

DESCRIPTORS: (\*BUILDINGS, \*plastics Applications), (BUILDING MATERIALS, Plastics),

CARD ALERT: 402, 415, 817

Proceedings of fifteen papers delivered at the conference related to the various aspects of the use of plastics in construction including modular engineering; use in airplane construction; use of PVC; support of coal mine structures with plastics; polymer concrete; pollution aspects of plastics disposal; and urethane spray foams in roofing. Bibliography data are included with some individual papers.

ID NO. - EI72X056047 256047

Evaluation of new plastics applications in construction, (Die Beurteilung neuer Einsatzgebiete fuer Kunststoffe im Bauwesen)

SCHWABE A

Kunstst-Plast v 18 n 9 1971 p 372-3 CODEN: KUPLA

DESCRIPTORS: (\*PLASTICS, \*Structural), (BUILDING MATERIALS, Plastics),

CARD ALERT: 415, 817

Economic and technical aspects are discussed in regard to the present state- of- the- art of plastics materials and plastics processing technology. In German.



ID NO.- EI72X056042 256042

Plastics and their application, (Bericht von der VDI-Hauptversammlung 1971. Kunststoffe und deren Anwendung)

Kunstst-Rundsch v 18 n 8 Aug 1971 p 394, 395 CODEN: KURUA

DESCRIPTORS: (\*PLASTICS, \*Structural), (PLASTICS INDUSTRY, West Germany), (ENGINEERING, Plastics Applications), (BUILDING MATERIALS, Plastics),

CARD ALERT: 415, 817

This is a report on the meeting of the Association of German Engineers (VDI) which was partly devoted to plastics application in construction and engineering. Included are comprehensive proceedings of three papers held at conference which dealt with the replacement of metal by engineering plastics in machine design, with the use of plastics in sandwich construction, and with production, application and performance of composite materials based on carbon fiber reinforced plastics. In German.

ID NO.- EI72X054503 254503

Plastic former for in- situ trough floor construction

Brit Plast v 44 n 11 Nov 1971 p 135 CODEN: BRPLA

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (PLASTICS, Polypropylene), (PLASTICS, Molding),

CARD ALERT: 415, 817

This is a brief report on design and manufacture of a new one way spanning trough former, used in production of concrete floors. This trough floor system will replace the steel formers and lattice ribs formerly employed. The T form is injection molded from polypropylene and will produce a ribbed floor with 125 mm wide ribs at 600 mm centers.

ID NO.- EI72X054062 254062

Try a plastic city hall

FAKCLAM E

City Manager, Bronson, Mich

Am City v 87 n 1 Jan 1972 p 49-50

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics),

CARD ALERT: 415, 817

The building at Bronson, Mich is 32x60 ft in area and 12 ft high. It is of frameless construction with load-bearing wall panels with a maximum size of 32x12 ft. Wall and roof panels contain 2 in. of urethane insulation, sandwiched as a core between the exterior and interior panel surfaces. Both wall and roof panels are white reinforced plastic.

ID NO.- EI72X053265 253265

Specifications and testing of critical elongations in applications of thermoplastics building components- 3, (Vorgabe und Nachkontrolle kritischer Dehnungen in der Anwendung auf thermoplastische Bauteile)

POHRT J

Gummi, Asbest, Kunstst v 24 n 10 Oct 1971 p 1108, 1110, 1112, 1114  
CODEN: GAKSA

DESCRIPTORS: (\*PLASTICS, \*Testing), (BUILDING MATERIALS, Plastics), (PLASTICS, Mechanical Properties),

CARD ALERT: 415, 421, 817

In this third part of an article series, results of test program are presented which have been obtained by using the method of stress-crack testing. These results are compared with those obtained by using the standardized procedure, DIN 53455. Results are discussed in detail and some recommendations for designers are suggested. 3 refs. In German.

ID NO.- EI72X052971 252971

RP scores in Czech tower

Mod Plast v 48 n 4 Apr 1971 p 89 CODEN: MOPLA

DESCRIPTORS: (\*PLASTICS, \*Reinforced), TELEVISION TOWERS, (BUILDING MATERIALS, Plastics), (PLASTICS INDUSTRY, Czechoslovakia),

CARD ALERT: 408, 415, 716, 817

Description of sheathed TV tower designed in Czechoslovakia made of GFRP material. The tower includes restaurant and hotel at base. Construction makes novel use of structural and electronic properties of RP in esthetically pleasing design. The hybrid hyperboloid structure is 295 ft high and makes use of entirely metal-free zone, plus a unique application of prestressed, pultruded polyester/glass strust. Pultruded rods, post-tensioned to withstand wind loads, support GFRP/urethane foam panels in metal-free zone. One other innovative use of GFRP is the stack of five cylindrical shielding elements used to protect the 12 quadruplet dipole antennas.

ID NO. - EI72X051503 251503

Building and construction

HALL A

Mod Plast v 48 n 10 Oct 1971 p 82-3 CODEN: MOPLA

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (PLASTICS INDUSTRY, United States),

CARD ALERT: 415, 817

Statistical data related to present and future plastics applications in construction buildings are accompanied by a discussion of several aspects which may affect future development. Particular consideration is given to improvement of flame retardancy as well as to the production cost as most important factors for the future growth. Consumption may top the 12 billion- lb mark by 1980 with factory housing taking off.

ID NO.- EI72X051317 251317

Use of polymeric materials as protective coatings for structures  
KALINCHEV VA

Plast Massy n 10 1971 p 59-60. See also English translation in Sov  
Plast n 10 1971 p 67-8 CODEN: PLMSA

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (BUILDINGS,  
Protective Coatings),

CARD ALERT: 402, 415, 813, 817

The main characteristics of penetration of polymers by organic  
liquids and their vapors are examined. Values are given for  
coefficients of permeability, which can be used for the selection of a  
protective polymeric materials. Results from experimental measurement  
are tabulated and discussed. 5 refs.

ID NO.- EI72X051030 251030

Difficult decade

Mod Plast v 48 n 10 Oct 1971 p 69-74 CODEN: MOPLA

DESCRIPTORS: (\*PLASTICS INDUSTRY, \*United States), (BUILDING MATERIALS, Plastics), (PACKAGING MATERIALS, Plastics),

CARD ALERT: 415, 694, 817

General discussion is presented which deals with the future of the plastics industry in relation to the Plastics Exhibition, Chicago, 1971. Construction building and packaging markets are acknowledged as the greatest customers of plastics plants. Automation and lowering of production cost are among topic requirements.



ID NO.- EI72X050220 250220

Plastics applied

Appl Plast v 14 n 5 Oct 1971 p 17-19 CODEN: APTCA

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (PLASTICS INDUSTRY, United Kingdom),

CARD ALERT: 415, 817

This survey of the plastics uses in construction and various applications includes- sealing plugs for cars; low- cost litter bins; transparent PVC roofing; plastics in stainless steel tube plant; rugged to the core; epoxy resin road surface system; '%curing'%Milan Cathedral; and transparent roof for stadium.

ID NO. - EI72X046101 246101

Extruded PVC foam profiles take on wood moldings

Mod Plast v 48 n 11 Nov 1971 p 50-1 CODEN: MOPLA

DESCRIPTORS: (\*PLASTICS, \*Extrusion), (POLYMERS, Polyvinyl Chloride)  
, (BUILDING MATERIALS, Plastics),

CARD ALERT: 415, 815, 817

Technical and economic considerations are presented relating to cellular vinyl moldings which are making inroads into the market for prefinished wood in mobile and other homes. Properties of typical foamed PVC compounds are tabulated. Processing techniques employed are also mentioned.

ID NO.- EI72X045420 245420

Plastics in glazing

DONOVAN JS

Brit Plast v 44 n 3 Mar 1971 p 79-83 CODEN: BRPLA

DESCRIPTORS: (\*GLASS, \*Polymers), (PLASTICS, Acrylic), (BUILDING MATERIALS, Plastics),

CARD ALERT: 415, 812, 815

General considerations related to advantages and disadvantages of plastics glazing as compared with conventional one are followed by description of materials used as well as of their properties, performance and production cost. The following glazing materials are discussed- GFRP (polyester), acrylic sheet, pressed PVC sheet, and polycarbonate sheet. Examples of plastics glazings are illustrated.

ID NO.- EI72X044372 244372

Acrylic clads Summerland

Brit Plast v 44 n 9 Sept 1971 p 200 CODEN: BRPLA

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (PLASTICS, Acrylic),  
(BUILDINGS, Facings),

CARD ALERT: 402, 415, 817

Brief report on the use of acrylic transparent off-center acrylic  
pyramids in cladding of leisure complex in the United Kingdom. The  
cladding panel of the Solarium as a part of the leisure complex is  
illustrated.

ID NO.- EI72X043932 243932

Plastics world visits Disney World

Plast World v 29 n 11 Nov 1971 p 60-1 CODEN: PLAWA

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics),

CARD ALERT: 415, 817

This is a brief report on plastics applications in Disney World, Florida, which provides showcase for thousands of plastics uses, products of its own onsite processing operation. The most expressive plastics constructional application can be seen on an 18-story castle, which is 95% plastic. GFRP plays a leading role in Florida's Disney World.

ID NO.- EI72X042725 242725

Economic limits to the use of GFRPs

KOSHKIN LI; RAKHLIN IV

Plast Massy n 7 1971 p 15-22. See also English translation in Sov  
Plast n 7 1971 p 16-22 CODEN: PLMSA

DESCRIPTORS: (\*PLASTICS, \*Reinforced), (PLASTICS INDUSTRY, Soviet  
Union), (BUILDING MATERIALS, Plastics),

CARD ALERT: 415, 817

The main trends in the demand for GFRP in the Soviet Union and in  
the West are considered. GFRP are found to provide increasing  
competition for traditional construction materials. The relationship  
between the technical and economic limits of application of GFRP in  
the immediate future is discussed. Comprehensive statistical data  
related to application of GFRP in building and industry are included.  
14 refs.

ID NO. - EI72X041793 241793

How sensible is plastics in building. Innovation through industrialized building

HALLAM CGR

Plast Polym v 30 n 140 Apr 1971 p 114-17 CODEN: PLPOB

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics),

CARD ALERT: 415, 817

ID NO.- EI72X041575 241575

New Hungarian Novepox epoxy resins and mortars in construction- - 2,  
(Uj, hazai '%Novepox'% epoxigyantak es muanyaghabarcso az epitoipar  
szolgalataban)

SOOS L

Muanyag Gumi v 8 n 6 June 1971 p 180-5 CODEN: MUGUA

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (POLYMERS, Epoxy),

CARD ALERT: 415, 817

Products with epoxy resin binder may be used advantageously in  
construction. The '%Epitovegyianyagokat Gyarto Vallalat'%produces  
epoxy resins with its own process and other products for use in  
construction, which give good results in practice. In Hungarian with  
English abstract.



ID NO.- EI72X040440 240440

What future for PVC skirting

Brit Plast v 44 n 9 Sept 1971 p 198-9 CODEN: BRPLA

DESCRIPTORS: (\*PLASTICS, \*vinyl), (PLASTICS, Extrusion), (BUILDING MATERIALS, Plastics),

CARD ALERT: 415, 816, 817

Description of skirting boards made of rigid PVC by extrusion process. Several designs and applications of PVC skirting boards which perform special functions are illustrated. One of them holds a strip of carpet continuing the flooring up the wall, the other acts as an electrical conduit carrying wiring systems along grooves of ledges as integral parts of the extrusion.

ID NO.- EI72X037859 237859

Reinforced plastics applications

Appl Plast v 14 n 4 Aug 1971 p 24-7 CODEN: APTCA

DESCRIPTORS: (\*PLASTICS, \*Reinforced), (BUILDING MATERIALS, Plastics), (ENGINEERING, Plastic Applications), (PLASTICS INDUSTRY, United Kingdom),

CARD ALERT: 415, 817, 901

This is a report which is presented under the following headings- self- extinguishing resins; GFRP for salt saturator tanks; fiber composite sewage channel; reinforced plastics symposium; plastic ventilator housings; tanks for chemical storage; glass- fiber fascia and coping; beating corrosion in soap plant; new glass- fiber reinforcements; glass- fiber in space window; sports hall for children and adults.

ID NO.- EI72X037595 237595

Safety measures to protect workers in the manufacture of GFRP construction compounds, (Massnahmen zur Einhaltung des Arbeitsschutzes bei der Herstellung von GUP- Bauteilen)

HOEHLE G

Plaste Kaut v 18 n 4 Apr 1971 p 289-94 CODEN: PLKAA

DESCRIPTORS: (\*PLASTICS PLANTS, \*Health Hazard), (PLASTICS, Reinforced), (BUILDING MATERIALS, Plastics),

CARD ALERT: 415, 817, 914

Survey of materials used and their health hazard and flammable characteristics is followed by description of specific danger caused by glass and plastics dusts, peroxide catalysts, cobalt- accelerators, epoxy resins, and polyurethane foam. Recommendations for practical uses are given. 23 refs. In German.

ID NO.- EI72X036270 236270

Polyacrylate dispersions. A new basic material for sealants used in building applications, (Polyacrylat- Dispersionen. Eine neue Rohstoffbasis fuer Bauten- Dichtungsmassen)

FUESSL R

Kunststoffe v 61 n 9 Sept 1971 p 633-8 CODEN: KUNSA

DESCRIPTORS: (\*SEALS, \*Plastics), (BUILDING MATERIALS, Plastics), (PLASTICS, Acrylic),

CARD ALERT: 415, 601, 817

The author describes the present state of technology, a method of classification as well as the appropriate requirements, using these to point out the advantages and disadvantages of a new group of sealants for building purposes, based on aqueous acrylate dispersions. Examples of applications of acrylic- based sealants in the West German construction industry are described and illustrated. Techniques of applications as well as encountered troubles are also included in this report. 12 refs. In German.

ID NO.- EI72X035662 235662

Inflammability classification of materials, (Az egheto anyagok eghetosegi osztalyokba torteno sorolasarol)

HAZKOTO GP

Muanyag Gumi v 8 n 2 Feb 1971 p 62-3 CODEN: MUGUA

DESCRIPTORS: (\*BUILDING MATERIALS, \*Fire Resistance), (PLASTICS, Flammability), FLAMMABLE MATERIALS,

CARD ALERT: 415, 815, 914

The classification of construction materials according to their inflammability by the relevant standards is already inadequate for the characterization of combustible materials, primarily plastics, used in construction. In Hungarian.

ID NO.- EI72X034828 234828

Plastics as the construction material of the future, (Kunststoffe als Baumaterial der Zukunft)

Kunstst-Plast v 18 n 3 1971 p 104 CODEN: KUPLA

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (PLASTICS INDUSTRY, West Germany),

CARD ALERT: 415, 817

This is a brief report on the meeting of the West German Society for housing, city and rural planning, which has been devoted to the analysis of the present trend in construction building with particular attention paid to the use of plastics as construction materials. The report presents opinion and forecast of several German experts on matter under consideration. In German.

ID NO.- EI72X034748 234748

Facing panels made of plastics, (Aussenwandbekleidungen aus Kunststoffen)

Kunstst-Plast v 18 n 3 1971 p 98-100 CODEN: KUPLA

DESCRIPTORS: (\*BUILDINGS, \*Facings), (BUILDING MATERIALS, Plastics),

CARD ALERT: 402, 415, 817

General remarks related to materials and techniques employed in coating of outside walls of buildings are followed by description of various prefabricated panels which have been made with or of plastics materials. Mechanical properties and performance characteristics of facing panels based on GFRP, rigid PVC, polyurethane foam and expanded PS are tabulated and plotted in curves. Many examples of applications are illustrated. In German.

ID NO.- EI72X034741 234741

Considerations of flammability testing techniques for plastics materials and plastics structural components, (Problematik der Brandprueftechnik bei Plastwerkstoffen und Plastkonstruktionen)

HILDEBRAND C; FLORSCHUETZ P

Plast Kaut v 18 n 2 Feb 1971 p 122-4

DESCRIPTORS: (\*PLASTICS, \*Flammability), (BUILDING MATERIALS, Plastics), (PLASTICS, Testing),

CARD ALERT: 415, 421, 817

General remarks related to fire resistance and flammability of construction building materials are followed by the description of the laboratory flammability test employed in East Germany for evaluating plastics construction materials. Model fire field testing procedure is included in this report and results obtained are critically evaluated. Nomenclature, classification and test specifications for flammability and fire resistance determination are given. In German.



ID NO.- EI72X032800 232800

Reinforced plastic materials in farm building construction, (Le materie plastiche rinforzate nella costruzione dei fabbricati rurali)

RICCI C; CANDURA A; GUSMAN A

Mater Plast Elastomeri v 37 n 3 Mar 1971 p 256-63 CODEN: MPELA

DESCRIPTORS: \*FARM BUILDINGS, (BUILDING MATERIALS, Plastics), (PLASTICS, Reinforced),

CARD ALERT: 402, 817, 821

The possibilities of using glass fiber reinforced polyester resins in the construction of modest farm buildings were studied and numerous tests conducted. The results are tabulated and analyzed. 20 refs. In Italian.

ID NO.- EI72X032538 232538

Accelerated determination of the resistance moment of corrugated plastics, (Schnellbestimmung des Widerstandsmomentes von wellig geformten Kunststoffen)

GUT H

Plastverarbeiter v 22 n 6 June 1971 p 386-90 CODEN: PLARA

DESCRIPTORS: (\*PLASTICS, \*Mechanical Properties), (PLASTICS, Reinforced), (BUILDING MATERIALS, Testing),

CARD ALERT: 415, 421, 817

Using the calculation of the resistance moment of corrugated plastics for the building industry as an example, the author demonstrates the possibility of time- saving rationalization in computation, intending to stimulate further development in this direction. The computational pattern resulting from this simplification only requires a minimum of mathematical knowledge, thus being very likely to be rapidly accepted in practice. Nomographs for fast determination of required values are included. In German.

ID NO.- EI72X031513

231513

Accelerated and natural weathering of UPVC rainwater goods

HILL MR; LEGG MJ

Plast, Rubbers, Tex v 2 n 8 Aug 1971 p 299, 301

DESCRIPTORS: (\*PLASTICS, \*Weathering), (PLASTICS, Vinyl), (PLASTICS, Testing), (BUILDING MATERIALS, Plastics),

CARD ALERT: 415, 421, 817

Results of an experiment are reported in which natural and artificial weathering was performed on items made of newly introduced molding material based on PVC. After any exposition, natural or accelerated in weatherometer, changes in appearance, color Vicat softening point, and impact strength were determined. Correlation between natural and accelerated weatherings was established.

ID NO.- EI72X030613 230613

Plastic materials in the production of building components, (le materie plastiche nella produzione edilizia per componenti)

Mater Plast Elastomeri v 37 n 5 May 1971 p 416-28 CODEN: MPELA

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), OFFICE BUILDINGS,  
CARD ALERT: 402, 817

Numerous illustrated examples are given, dealing mostly with office building structures. They are based on the experience of the Italian architect R. Piano who has made a large contribution to studying the use of plastic materials in architecture. In Italian.

ID NO.- EI72X030346 230346  
How plastics compete with metal  
WHITNEY A

Can Mach Metalwork v 82 n 7 July 1971 p 38-41 CODEN: CMMNA

DESCRIPTORS: \*PLASTICS, (AUTOMOBILE MATERIALS, Plastics), (BUILDING MATERIALS, Plastics), (ELECTRIC APPLIANCES, Plastics Parts),

CARD ALERT: 402, 662, 704, 817

The report deals with the increasing use of plastics in automobiles, appliances, vacuum cleaners, construction, and in aerospace and industrial equipment.

ID NO.- EI72X026390 226390

Reinforced plastics in construction

LANGE HF

IMCO, Inc, Moorestown, NJ

Problem Solving with Plastics, Symp, Apr 13-15 1971. Nat Ass Corros Eng, 1971, p 80-1

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (PLASTICS, Reinforced),

CARD ALERT: 415, 817

The paper reviews the areas of usage of plastics in the past and projects future areas of use. Discusses some practical considerations on comparative costs, need, and results, and practical methods of manufacture. Illustrates what is on the shelf in the plastics supermarket- tanks, pipe, valves, hoods, stacks, ducts, fans, scrubbers, flumes, weir plates, slide gates, structural shapes, hangers, windows, louvers, doors, ladders, handrail, grating, cable trays, and meter consoles. Statistical data are included in this review.

ID NO.- EI72X024392 224392

Polypropylene registers hit in mobile homes

Plast Des Process v 11 n 2 Feb 1971 p 15-16 CODEN: PDPRA

DESCRIPTORS: (\*HOUSES, \*Moving), (BUILDING MATERIALS, Plastics), (PLASTICS, Polypropylene), (PLASTICS, Molding),

CARD ALERT: 402, 415, 816, 817

Report on the replacement of metal registers by those molded of PP. In each medium- to- large mobile home there are six to eight adjustable floor registers for the heating and air conditioning systems. The molded polypropylene registers have none of the disadvantages of metal, and offer a substantial cost savings. The entire floor register is molded at one time. The operation technique is described.

ID NO.- EI72X022999 222999

Technical problems encountered in the applications of plastics films and sheets and their solution, (Aktuelle technische Probleme bei der Anwendung von Kunststoff- Tafeln und- Folien und deren Loesung)

BANNING HJ; DIENER H; FREUDENBERGER F; RICKLING E; SCHOTTE K; WITT W  
Kunststoffe v 61 n 5 May 1971 p 337-41 CODEN: KUNSA

DESCRIPTORS: (\*PLASTICS, \*Sheet), (PLASTICS, Film), (BUILDING MATERIALS, Plastics), (RADIO EQUIPMENT, Plastics), (PACKAGING MATERIALS, Plastics),

CARD ALERT: 415, 694, 714, 817

Using examples from optics, electrical engineering, packaging, medical engineering as well as from the sector of radio, TV and sound recording and reproduction equipment, the problems in using plastics sheets and films are shown as well as the approaches that were made to solve them. Examples under considerations are illustrated. In German.



ID NO.- EI72X022994 222994

Design and processing recommendations for various honeycomb core materials, (Konstruktions- und Verarbeitungs- hinweise fuer unterschiedliche wabenartige Kernmaterialien)

HEITZ E

Gummi, Asbest, Kunstst v 24 n 1 Jan 1971 p 37-40 CODEN: GAKSA

DESCRIPTORS: (\*SANDWICH STRUCTURE, \*Manufacture), (BUILDING MATERIALS, Plastics), (BUILDING MATERIALS, Aluminum), (PLASTICS, Cellular),

CARD ALERT: 415, 541, 817

General considerations related to type and applications of sandwich constructions in building and engineering are followed by description of several core materials of different cross- sections and made of different materials mainly of aluminum and plastics foams. Types of adhesives used in the manufacture of sandwich panels are presented and their application techniques are described. German terminology used in production, trade and use of honeycomb core is included. In German.

ID NO.- EI72X021131 221131

Plastics applied

Appl Plast v 14 n 1 Feb 1971 p 16-17 CODEN: APTCA

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (PROTECTIVE COATINGS, Plastics),

CARD ALERT: 415, 539, 817

This survey describes plastics uses in engineering, construction building and technical application. It is presented under the following headings- nylon gears eliminate 'nuisance'; brightening kitchens; epoxy coating for New Mersey tunnel; sealing windows 300 ft up; new ideas in home decoration; permanent life for transparencies; and laminates for video data terminals.

ID NO.- EI72X020969 220969

Plastics and paint

BULLETT TR; MATHEWS PR

Paint Res Assoc, Middlesex, England

Plast Polym v 39 n 141 June 1971 p 200-3 CODEN: PLPOB

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (BUILDINGS, Protective Coatings), PAINT,  
CARD ALERT: 402, 415, 813, 817

Problems in painting, often specific to individual plastics, include initial wetting and subsequent adhesion on low-energy surfaces, softening or crazing of the plastic by solvents in the paint, softening of the paint by migration of plasticizer from the plastic, and loss of impact strength after painting. The problems vary for the same class of plastic because of surface differences arising during fabrication, e. g. different mold-release agents. Paint adhesion is improved by abrasion of the plastics surface but abrasion of rigid PVC OR ABS can seriously reduce impact strength.

ID NO. - EI72X019686 219686

Idea exchange

Mod Plast v 48 n 2 Feb 1971 p 30, 32 CODEN: MOPLA

DESCRIPTORS: (\*SANDWICH STRUCTURES, \*Plastics), (SANDWICH STRUCTURE, Paper), (PLASTICS, Reinforced), (BUILDING MATERIALS, Light Weight),  
CARD ALERT: 415, 811, 817

Description of a new developed sandwich panel consisting of glass-reinforced polyester skins and phenolic-impregnated paper honeycomb core. Developed for the truck trailer and marine container markets, the developing boom in the housing industry caused the company's market people to have second thoughts. They now see the greatest potential for the material in vacation homes and other modular construction. Produced continuously by a proprietary process, the sandwich panel reportedly will withstand over 300 psi weighs from 1.2 to 2.5 psf in thicknesses from 1 to 6 in., and is available in widths to 92 in.

ID NO.- EI72X014048 214048

Structural plastics for large moldings

MUSKAT IE

C-J Corp, Miami, Fla

Appl Polym Symp n 15 1970 p 185-91

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (PLASTICS, Reinforced

),

CARD ALERT: 816, 817

A review of the development and present status of structural plastics was presented, including their limitations and problems associated with their commercial use.

ID NO.- EI72X010997 210997

Vinyl siding seeks its share in 2.5 billion dollar housing market

Progr Plast v 12 n 11 Nov 1970 p 14 CODEN: PRPAB

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (PLASTICS, Vinyl), (PLASTICS, Extrusion),

CARD ALERT: 415, 816, 817

Report on production of PVC sidings and their application in the Canadian construction industry. The new line is manufactured from extruded rigid polyvinyl chloride compound, and is designed to eliminate painting and reduce maintenance to a minimum. Since the siding is a solid sheet, not a coating or veneer, sun will not cause it or moisture cause it to blister. Advantages of PVC sidings are outlined and examples of their applications are illustrated.

ID NO.- EI72X008846 208846

Architect's view of reinforced plastics in construction

RICHARDS JN; SITZENSTOCK RP

SPI, 26th Annu Tech Conf Reinf Plast/Compos Div, Proc, Washington, DC, Feb 9-12 1971 Sect 5-E, 2 p

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (PLASTICS, Reinforced), (BUILDINGS, Plastics Applications), ARCHITECTURE,

CARD ALERT: 402, 415, 817

This paper expresses one point of view as to how reinforced plastic composites presently serve the architect, what problems still exist in his mind relative to codes and standards, and what the plastics industry should do to develop a greater degree of credibility in this material that would be meaningful to the architect. Discussion of crucial problems facing the reinforced plastics industry in the field of building applications is followed by some general suggestions.

ID NO.- EI72X008834 208834

Light- stable fire retardant polyester for building panels and gel coats

BUCK DA; MURRAY EJ

SPI, 26th Annu Tech Conf Reinf Plast/Compos Div, Proc, Washington, DC, Feb 9-12 1971 Sect 5-D, 4 p

DESCRIPTORS: (\*PLASTICS, \*Polyester), PHOSPHORUS COMPOUNDS, (PLASTICS, Flammability), (BUILDING MATERIALS, Plastics),

CARD ALERT: 415, 803, 817

A new commercial polyester is introduced which exhibits excellent fire retardency combined with outstanding color stability and weatherability. The application of Polylite 32- 518 in GFRP exterior building panels and gel coats is discussed. The advantages of Polylite 32- 518 compared to other commercially available fire retardant polyester resins is presented including cost considerations. Polylite 32- 518 is a polyester which incorporates phosphorus as the flame retardant.



Durability of plastics in building

BAKKER PJ

Plastica v 23 n 7 July 1970 p 301-12 CODEN: PLASA

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (PLASTICS, Aging), ENVIRONMENTAL ENGINEERING, (PLASTICS, Structural),

CARD ALERT: 415, 817, 901

With regard to durability of plastics applied in building, three categories of factors play a role- environmental effects, properties that are significant for applications in building, and circumstances of application. Specific aspects of aging are considered for PVC, polyester and epoxy resins; phenol- , melamine- , and ureaformaldehyde resins; polyethylene, polypropylene, polystyrene, polyurethanes, polyamides, polyacrylics, polyvinyl fluoride and polytetrafluoroethylene; cellulosics, polycarbonates, acetals, chlorinated polyethers, polyvinylidene chloride, and linear polyesters. Environmental influences discussed include climate, air-%% polluting chemicals, temperature, wind, lights, and humidity.

ID NO.- EI72X006584 206584

Plastics construction also in Greece, (Kunststofconstructie ook in Griekenland)

Plastica v 23 n 7 July 1970 p 336-7 CODEN: PLASA

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics),

CARD ALERT: 415, 817

A description, with plans and photographs, is given of a glassfiber-reinforced polyester pavilion used at a hydrothermal spring in Greece. In Dutch.

ID NO.- EI72X006167 206167

Plastics and textile fibers in construction, (Les plastiques et les fibres textiles dans le batiment)

SANFOURCHE J

Plast Mod Elastomeres v 22 n 2 Mar 1970 p 76-81, 139 CODEN: PMELA

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), TEXTILE FIBERS, PLUMBING Fixtures,

CARD ALERT: 402, 619, 817, 819

Applications of plastics (including glass- fiber- reinforced products) and textile fibers in the building industry (e. g. in pipes, ceilings, steeples, walls, dams, etc) may represent the major market for high polymers within a few years. Increases in annual consumption of polymers in this field have been 10% in United States, 15 to 20% in Europe, as contrasted with 3 to 5% for cement and steel. Products most used include PVC, polystyrene, polyesters, polyethylene and polyamides (especially fibers). Advantages include their ease of prefabrication, molding and coloring, and their low density and high corrosion resistance (useful in sanitary fixtures). In French.

ID NO.- EI72X005475 205475

What's the limit to plastics applications

Aust Plast Rubber J v 25 n 302 Sept 1970 p 7, 10 CODEN: APRJA

DESCRIPTORS: \*PLASTICS, (AUTOMOBILE MATERIALS, Plastics), (BUILDING MATERIALS, Plastics), (ELECTRICAL APPLIANCES, Plastics Parts),

CARD ALERT: 415, 662, 704, 817

The world- wide trend to sophisticated applications for plastics products still grows. This article briefly looks at some of the latest examples. Some example of more sophisticated applications are given. They include- ingenious cabinet lock; automobile structural members; office and household appliances; and structural part in construction building.

ID NO.- EI72X005392 205392

The lower glass content brings advantages, (Geringerer Glasgehalt bringt Vorteile)

MENGES G; KELLENTER M

Kunstst-Rundsch v 17 n 9 Sept 1970 p 457-65 CODEN: KURUA

DESCRIPTORS: (\*PLASTICS, \*Reinforced), (PLASTICS, Structural), (BUILDING MATERIALS, Plastics), (PLASTICS, Mechanical Properties),

CARD ALERT: 415, 817

This article considers all factors affecting strength properties of GFRP with particular attention given to effect of glass content in glass/plastic laminates on their performance. Comprehensive program is reported in which broad experimental data presented in curves are mathematically evaluated. Results from experiments and computation are discussed and some practical conclusions have been drawn out. It has been shown that in many structural applications of GFRP parts a lower glass content is advisable as one which exhibits better strength. In German.

ID NO.- EI72X004711 204711

Electrostatic powder coating of buildings panels

SCHRANTZ J

Ind Finish (Wheaton, Ill) v 47 n 1 Jan 1971 p 16-21, 24 CODEN:  
IFI11A

DESCRIPTORS: \*BUILDING MATERIALS, (PROTECTIVE COATINGS,  
Electrostatic), (PROTECTIVE COATINGS, Plastics),

CARD ALERT: 514, 539, 813, 817

At the Columbus, Neb, plant of Behlen Manufacturing Co, corrugated building panels are in contrast to the present trend, not only formed first, but a high percentage of them is finished with a PVC powder coating. This procedure offers a number of advantages, such as holding the inventories at a minimum, application of an extra- thick 10- mil powder PVC coating, and eliminating the possibility of marring the panels in any post- forming process. The five- stage pretreatment and the powder coating application are described.

ID NO.- EI72X002956 202956

Developments in the plastics market- - the CMRA/ECMRA marketing congress, (Ontwikkelingen op de kunststoffenmarkt, Het CMRA/ECMRA marketing congres)

SPRIETSMA HB

Plastica v 23 n 8 Aug 1970 p 349-54 CODEN: PLASA

DESCRIPTORS: (\*PLASTICS INDUSTRY, \*Western Europe), (BUILDING MATERIALS, plastics), (PLASTICS, Heat Resisting), (PLASTICS, Reinforced), MARKETING,

CARD ALERT: 415, 817, 911

A survey is given of the joint meeting of the Chemical Marketing Research Association and the European Marketing Research Association, June 1970 at Amsterdam. Lectures were given on the following subjects- - the product life cycle with regard to plastics, additives, plastics in building, high temperature and engineering plastics, reinforced thermoplastics. In Dutch.

New applications in construction buildings, (Nouveaux progres des plastiques dans le batiment)

Belg Plast n 15 Jan 1971 p 3-4, 6, 8-10, 12, 14-18

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (PLASTICS, Reinforced), (PLASTICS, Vinyl), PLASTICS, ABS, (PLASTICS, Cellular),

CARD ALERT: 402, 415, 817

This article presents brief description of many structural elements and complete constructions made of, or with, various plastics in France and other European countries. Among many items, the most important are GFRP panels employed as prefabricated construction elements. Report also includes such plastics applications as recreation facilities, swimming pools, medical equipment, etc. In French and Flemish.



ID NO.- EI72X002011 202011

Fireproofing test of fascia panels made of reinforced polyester,  
(Brandproeven op gevelpanelen van gewapend polyester)

LECERF P; MAYRARGUE C

Belg Plast n 9 July 1970 p 29, 32-5

DESCRIPTORS: (\*PLASTICS, \*Reinforced), (BUILDING MATERIALS, Plastics  
, (BUILDING MATERIALS, Testing), (BUILDINGS, Facings), (PLASTICS,  
Fire Resistance),

CARD ALERT: 402, 415, 421, 817

This is a report on field tests performed with GFRP building materials employed in form of prefabricated panels in building. Results from experiments, presented also in photos, are described and discussed. Gases produced during burning test were analyzed and evaluated from health hazard viewpoint. Recommendations for practice are given. In Flemish.

ID NO.- EI72X000942 200942

Plastics processing industry of West Germany in statistics, (Die kunststoffverarbeitende Industrie der BRD in der Statistik)

Kunstst-Plast v 17 n 9 1970 p 354-8 CODEN: KUPLA

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (PLASTICS INDUSTRY, West Germany),

CARD ALERT: 415, 817

This is a general report on the development of West German plastics production and application in the period of from 1957 to 1969 with particular attention given to figures relating to plastics uses in construction applications. Survey includes building applications such as sandwich constructions, laminates, insulating foam, structural members, window frames and window shades, pipes, profiles, doors, flooring and wall coverings. Furniture industry is included. Some economic data are also presented particularly those related to price development. In German.

ID NO.- EI71X183686 183686

Lighting of internal areas by means of skylights, (Belichtung innenliegender Raumflaechen durch Oberlichter)

Kunst-Plast v 17 n 11 1970 p 452-4

DESCRIPTORS: (\*LIGHTING FIXTURES, \*Plastics), (PLASTICS, Reinforced), (PLASTICS, Acrylic), (BUILDING MATERIALS, Plastics), (ROOFS, Plastics),

CARD ALERT: 402, 415, 707, 817

Design consideration of various roofing systems are followed by description of various types of skylights made of acrylics and GFRP, and applied in various European buildings. Particular attention is given to flat roof of large sizes with many plastics skylights of different shapes. Advantages of polyester-based skylights are outlined with particular attention given to excellent weather resistance. Some technical considerations are also included in reference to production and in-place setting. In German.

ID NO.- EI71X181869 181869

Saddle roof covered with prefabricated roof elements, (Zadeldak  
gedicht met prefab dakelementen)

VISSER CA

Plastica v 23 n 7 July 1970 p 324-5 CODEN: PLASA

DESCRIPTORS: (\*POOFS, \*Prefabricated), (BUILDING MATERIALS, Plastics  
, (ROOFS, Plastics), (PLASTICS, Polystyrene), (POLYMERS, Polyvinyl  
Chloride),

CARD ALERT: 402, 415, 817

A prefabricated roofing element used in Norway contains a galvanized  
steel plate, bituminous coating, polystyrene foam insulation, and  
channels for escape of moisture. PVC film is also used in the roofing  
process. In Dutch.

ID NO.- EI71X181576 181576

Building with plastics- 3, (Bouwen met kunststoffen)

VANZETTEN L

Plastica v 23 n 7 July 1970 p 314-19 CODEN: PLASA

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (PLASTICS, Structural), (POLYMERS, Polyvinyl Chloride), (PLASTICS, Polystyrene), (PLASTICS, Cellular),

CARD ALERT: 415, 817

An illustrated description is given of plastics products offered by several British companies for use in buildings. Polystyrene fixtures, PVC foam or sheet doors, polyester mantels for fireplaces, PVC gutters and polystyrene foam ceilings are among the products described. In Dutch.

Composition stone

MICHAELS AS

Edlon Machinery Ltd, London, England

Composites v 1 n 5 Sept 1970 p 306

DESCRIPTORS: (\*PLASTICS, \*Reinforced), (BUILDING MATERIALS, Plastics

),

CARD ALERT: 415, 817

Description of a new machine developed in West Germany for the production of composition stone designed for wall cladding and floors to replace the conventional stone concrete or marble in some applications. The composition stone consists of thermosetting resins and fillers which are metered and mixed precisely by the new machines to provide the constant economic production of thermosetting composition stone. The liquid components- resins, accelerator, catalysts and pigments are exactly metered to a mixing head where a mineral filler is added and mixed thoroughly. This is then fed into molds operation techniques presented and advantages of new process are outlined. Mechanical properties of the composition stone window sill are tabulated and compared with those of concrete.

ID NO.- EI71X180812 180812

Long- term failure by buckling of thermoplastic construction elements, (Het langeduur knikgedrag van thermoplastische constructie-elementen)

ZONNEVELD R

Plastica v 23 n 4 Apr 1970 p 147-53 CODEN: PLASA

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics),

CARD ALERT: 413, 817

After a short general description of failure by buckling, the buckling behavior of some thermoplastics materials is described and illustrated by some test results. A system for calculation of the beginning of buckling is based on a criterion for buckling called critical deformation. Data are presented for polyethylene, polypropylene, and a propylene copolymer. In Dutch.

ID NO.- EI71X179955 179955

Composites news. Applications

Composites v 1 n 5 Sept 1970 p 263-4

DESCRIPTORS: (\*PLASTICS, \*Reinforced), (BUILDING MATERIALS, Plastics  
) ,

CARD ALERT: 415, 817

Survey of recent developaent in GFRP applications is presented under the following headlines- jet airplane brake disk made of carbon fiber reinforced carbon; composites in Blackpool tower; GFRP transporters for sulfuric and hydrochloric acid; Polish GFRP pleasure craft and fishing vessels for African countries; GFRP pressure gage; and application of GFRP for the dome in a mosque.



ID NO.- EI71X179951 179951

Recommendations for manufacturing GFRP- polyurethan foam sandwich constructional elements, (Hinweise zur Herstellung von GFK-PPolurethanschaum- Sandwichelementen)

HEITZ E

KunststRundsch v 17 n 11 Nov 1970 p 581-7

DESCRIPTORS: (\*PLASTICS, \*Reinforced), (PLASTICS, Cellular), (PLASTICS, Polyurethane), (BUILDING MATERIALS, Plastics),

CARD ALERT: 415, 817

General considerations of design principle of sandwiched construction with GFRP skin and polyurethane core are followed by survey of existing cellular plastics based on urethane polymers and their properties and performance. Types of sandwich constructions and their design requirement are discussed. Processing techniques are briefly pointed out and some application possibilities for sandwich construction elements are demonstrated. 7 refs. In German.

ID NO.- EI71X179437 179437

Experimental plastics house now also in Sweden, (Experimenteel kunststofhuis thans ook in Zweden)

Plastica v 23 n 6 June 1970 p 279 CODEN: PLASA

DESCRIPTORS: (\*HOUSES, \*Plastics), (BUILDINGS, Swdeent), (BUILDING MATERIALS, Aluminum), (BUILDING MATERIALS, Plastics),

CARD ALERT: 402, 415, 817

A round plastics single- family house designed by S. Berglund, consists of a concrete foundation and a roof made of a sandwich construction of two glass- fiber- reinforced polyester shells and a core of rigid PVC foam. The roof is constructed of 20 identical sectors of a circle, with a PMMA skylight dome at the center of the circle. Between roof and foundation are aluminum- framed windows. The interior includes a PMMA sanitary unit, hot air heating, and air conditioning. The luxury- prototype includes a terrace and swimming pool. In Dutch.

ID NO. - EI71X179021 179021

Joint sealing with prefabricated profiles, (Fugenabdichtung mit vorgefertigten Profilen)

LUETGEBRUNE H

Ind-Anzeiger v 92 n 58 July 14 1970 p 1393-9 CODEN: IANZA

DESCRIPTORS: (\*PLASTICS, \*Sealing), (BUILDING MATERIALS, Sealants),

CARD ALERT: 402, 817

Reference is made to sealants for structural members. The materials employed for prefabricated profiles are described. Certain advantages of thermoplastic materials over elastomers are pointed out. PVC profiles are simpler and easier to produce than elastomer profiles. Some illustrated data on suitable profile designs are presented. It is pointed out that every application of prefabricated profiles must be treated individually. In German.

ID NO.- EI71X179020 179020

Experience with plastic sealants for the building trade,  
(Erfahrungsnachweis fuer Kunststoff-Baute Abdichtungen,  
Entwicklungstendenzen)

KNAPPKE G

Ind-Anzeiger v 92 n 58 July 14 1970 p 1401-4 CODEN: IANZA

DESCRIPTORS: (\*BUILDING MATERIALS, \*Sealants), (PLASTICS, Sealing),

CARD ALERT: 402, 817

Trends of development. The answer to the question whether plastics are suitable for this purpose is definitely yes. There are many chemical materials available and the user should try to get good advice from experienced processors. Several case histories and later examinations of the products are described. In German.

ID NO.- EI71X177406 177406

Expanded vinyl extrusions replace wood molding in mobile homes

SPE J v 27 n 6 June 1971 p 34 CODEN: SPEJA

DESCRIPTORS: (\*PLASTICS, \*Extrusion), (PLASTICS, Vinyl), (BUILDING MATERIALS, Plastics),

CARD ALERT: 415, 817

New vinyl molding extrusions are made to be as dense, resilient, and porous as wood, but will not break, split or crack in normal handling. Introduced as a replacement for wood- molding in the mobile home and vehicle industries, vinyl molding extrusions may comprise close to 50% of the total prefinished molding market in the next 5 yr. Physical and mechanical characteristics of the new vinyl materials are included.

ID NO.- EI71X177101 177101

Use of adhesion- bonding techniques in prefabrication of structural members, (Die Vorfabrikation von Fertigbauten bedient sich der Klebtechnik)

Kunstst-Plast v 17 n 11 1970 p 447 CODEN: KUPLA

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (POLYMERS, Epoxy), (BUILDING, Prefabricated),

CARD ALERT: 405, 415, 817

Report on techniques employed by one of Swiss contractors in building construction utilizing structural components made with epoxy resin adhesive mortar. Application techniques are briefly described and some construction buildings obtained from prefabricated elements are illustrated. In German.

ID NO. - EI71X176923 176923

Recommendations for graphic representation of GFRP construction components, (Hinweise fuer die zeichnerische Darstellung von GFT-Bauteilen)

HEITZ E

Kunststofftechnik v 9 n 11 Nov 1970 p 401-6 CODEN: KUNSB

DESCRIPTORS: (\*PLASTICS, \*Reinforced), (BUILDING MATERIALS, plastics), (BUILDINGS, Design),

CARD ALERT: 402, 415, 817

This is a suggestion how to represent various structural elements used in building construction made of GFRP by using various techniques. Particular attention is given to representation of sandwich construction, fiber orientation, expanded sandwich panels, number and direction of laminating layers, drilled holes, local collapse of the cellular structure, etc. In German.

ID NO.- EI71X176673 176673

Role of glass fiber reinforced plastics in the Italian building industry, (I plastici rinforzati con fibre di vetro nell'edilizia in Italia)

DE LUCA G; FULGINI R

Vetreria Italiana Balzaretti Medigliani, Milan, Italy

Poliplasti Plast Rinf v 18 n 150 May 1970 p 35-48 CODEN: PPRFA

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (PLASTICS, Reinforced), BUILDINGS,

CARD ALERT: 402, 412, 817

Numerous applications such as roofing structures, walls, facings, etc, are described, accompanied by 50 photographs. In Italian.



ID NO. - EI71X176498 176498

Fifth plastics processing colloquium, (5. Kunststofftechnisches Kolloquium)

Gummi, Asbest, Kunstst v 23 n 12 Dec 1970 p 1389-90, 1392-3 CODEN: GAKSA

DESCRIPTORS: (\*PLASTICS INDUSTRY, \*West Germany), (PLASTICS, Reinforced), (PLASTICS, Mechanical Properties), (BUILDING MATERIALS, Plastics),

CARD ALERT: 415, 816, 817

In this second continuation of a report on technical conference held in West Germany, 1970, proceeding of further seven papers are presented. They are related to comparison of properties of synthetic fiber reinforced plastics and GFRP; studies of reinforced plastics made of heat resistant polymers; use of elastomer bearings in concrete constructions; properties of bonding systems made of thermoplastics and GFRP (polyurethane); mechanization of GFRP parts production through paste processing; stabilization studies on GFRP shells. In German.

ID NO. - EI71X176482 176482

Building with plastic. Construction 1970. A review, (Bauen mit Kunststoff. Constructa 1970. Ein Rueckblick)

MARTIN H-D

Kunststofftechnik v 9 n 8 Aug 1970 p 291-5 CODEN: KUNSB

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (PLASTICS INDUSTRY, West Germany), (PLASTICS, Cellular),

CARD ALERT: 415, 817

This is a comment on some aspects, related to the use of plastics as structural components in construction buildings in connection with the construction industry exhibition held in West Germany. Some crucial experiments undertaken by several companies are reported. One of them includes introduction of polystyrene foam concrete composite materials which is highly promising for dwelling construction. Other new plastics building materials includes- polyester foam, window frame made of rigid PVC profiles, flooring tiles, etc. In German.

ID NO.- EI71X175981 175981

Development of the use of plastics as structural material in construction, (Zur Entwicklung des Einsatzes von Plastwerkstoffen als Konstruktionsmaterial)

PFEFFERKORN W

Plaste Kaut v 17 n 11 Nov 1970 p 789-94 CODEN: PLKAA

DESCRIPTORS: (\*PLASTICS, \*Structural), (BUILDING MATERIALS, Plastics), (PLASTICS, Mechanical Properties),

CARD ALERT: 415, 817

A description is given of problems of using plastics as structural material resulting from their properties, and some aspects to be observed by the designing engineer are derived when using plastics in this field. Materials testing and mechanical properties of plastics materials are discussed and some calculations necessary in designing of structural parts are included. 10 refs. In German.

ID NO.- EI71X175668 175668

New plastics applications in construction buildings, (Nouveaux  
progres des plastiques dans le Batiment)

Belg Plast n 8 June 1970 p 13-14, 17-18

DESCRIPTORS: (\*BUILDING MATERIALS, \*plastics), (BUILDING,  
Prefabricated),

CARD ALERT: 402, 415, 817

In this continuation of the previous paper on the same subject,  
several plastics structural members are given and illustrated by  
photos. All- plastics dwellings are also included. PVC has been  
shown to be employed in most described building applications,  
particularly as thermoformed structural members (e. g. ceiling) and as  
pipe and pipe fittings. In French.

ID NO.- EI71X175593

175593

International Symposium '%Plastics in construction%',  
(Internationales Symposium '%Kunststoffe im Bauwesen'%)

KunststPlast v 17 n 7 1970 p 273

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (PLASTICS, Reinforced  
) , (PLASTICS INDUSTRY, Netherland),

CARD ALERT: 415, 816, 817

Brief report on conference, in which 400 members participated from 23 countries, held in Netherland, Apr 1970. Description of several buildings, newly erected in Holland, with extensive uses of plastics components such as glass fiber reinforced polyester roof, a cupola over large hall, futuro- house, etc. The titles of 23 papers held at conference are included in the report. In German.

ID NO.- EI71X175325 175325

Solid GFRP profiles for supporting struts, (GEK- Vollprofile fuer Stabtragwerke)

METZ K

Farbenfabriken Bayer AG, Leverkusen, West Germany

Kunststoffe v 60 n 12 Dec 1970 p 971-3 CODEN: KUNSA

DESCRIPTORS: (\*PLASTICS, \*Reinforced), (BUILDING MATERIALS, Plastics), (PLASTICS, Processing),

CARD ALERT: 415, 816, 817

A new method of manufacture facilitates the production of profiles from glass fiber reinforced polyester resins with a glass fiber content of 80%. These profiles possess very high strength and they can be produced straight, curved, bent or crossed-over. A special method of clamping, developed at the same time, enables strut systems to be constructed. Examples of various structural elements made of solid GFRP profiles are given and their future application possibilities are outlined. In German.

ID NO. - EI71X174725 174725

Analysis of sandwich panels. The significance of shear deformation

ALLEN HG

Southampton Univ, England

Composites v 1 n 4 June 1970 p 215-20

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (PLASTICS, Cellular),  
MATERIALS TESTING,

CARD ALERT: 415, 421, 817

The implications of core shear deformations in the calculation of stresses, deflections and buckling loads are discussed in elementary terms. Simple criteria are given for the classification of panels according to the stiffness of the cores. Desirable attributes of good core materials are described. 12 refs.

Evaluation of a polymer cement composite

NUTT WO

Portland Cement Mfrs, Ltd, Surrey, England

Composites v 1 n 4 June 1970 p 234-8

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (PLASTICS, Reinforced), CEMENT,

CARD ALERT: 412, 415, 817

Description of polymer cement developed in the United Kingdom which combines together crystalline and polymeric forms. Its properties exhibit features of both systems. This material consists of the coincident polymerization of polyester resin and hydration of Portland cement to provide an amorphous polymeric matrix within which a continuous crystalline scaffold of hydrated cement gel was structured. This development has resulted in a significantly new approach to the application of plastics binders in the construction industry. Properties of material developed are discussed and the field of present and intended applications is outlined. 7 refs.



ID NO. - EI71X174716 174716

Sport- and play- areas surfacings made of and with plastics,  
(Sportund Spielflaechenbelaege aus und mit Kunststoffen)

SCHWABE A; KNAPPKE G

Institut fuer das Bauen mit Kunststoffen, Darmstadt, West Germany

Kunstst-Plast v 17 n 5 1970 p 173-81 CODEN: KUPLA

DESCRIPTORS: (\*SPORTING GOODS, \*Plastics), STADIUMS, (BUILDING  
MATERIALS, Plastics),

CARD ALERT: 402, 415, 817

This article presents survey of materials based on the use of  
plastics and rubbers available in West Europe which have found  
application as building material in construction of sport fields and  
playgrounds. Composition, properties, performance, suppliers and  
prices of several commercial materials are tabulated. Examples of  
applications are described and illustrated. In German.

ID NO.- EI71X174715 174715

Rigid foam as damping layer and stiffening for steel roof,  
(Hartschaum als Daemmschicht und Versteifung fuer Stahldach)

Kunstst-Plast v 17 n 5 1970 p 182 CODEN: KUPLA

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (PLASTICS, Cellular),  
(PLASTICS, POLYSTYRENE), (ROOFS, Insulation),

CARD ALERT: 402, 415, 817

Description of flat roof of a large area which is made of steel beam girder coated with profiled steel sheets which have been insulated with rigid expanded polystyrene. Extruded sheets of polystyrene foam were adhesive bonded to steel sheet by using melted bituminous material. Some design details are given and explained. Advantages of the new roof construction are outlined. In German.

ID NO.- EI71X174685 174685

New structural forms for concrete construction, (Neuartige Struktur-Schalungsmatrizen fuer den Betonbau)

Kunstst-Plast v 17 n 6 1970 p 228 CODEN: KUPLA

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), CONCRETE, (PLASTICS, Cellular), (PLASTICS, Polystyrene),

CARD ALERT: 412, 415, 817

Description of new sheathing system developed in Switzerland which consists of expanded polystyrene plates with decorative design which are used in construction of concrete walls with finished outer surfaces. Advantages of the system as well as its operation and possibility in construction building are outlined. Some of applications for the system developed are illustrated, In German.

ID NO. - EI71X173849 173849

Safety characteristics for designing plastics constructions,  
(Sicherheitskennwerte zur Bemessung von Plastkonstruktionen)

ZOEPPFEL M

Plaste Kaut v 17 n 10 Oct 1970 p 765-70 CODEN: PLKAA

DESCRIPTORS: (\*PLASTICS, \*Structural), (BUILDING MATERIALS, Plastics  
) , (BUILDINGS, Design), (PLASTICS, Reinforced),

CARD ALERT: 402, 415, 817

A method is proposed for determining characteristic values of safety on the basis of design by limiting states, with reducing coefficients included in summary safety coefficients, which depend on the properties of materials and conditions of operation involved. Under consideration were constructional structures made of GFRP as well as their performance under long-term loading. 15 refs. In German.

ID NO.- EI71X173000 173000

Elements composed of several layers of rigid polyurethane foam and asbestos cement sheeting, (Mehrschichtelemente aus Polyurethanhartschaumstoff und Asbestzementplatten)

GEHRKE K

Bauzeitung (Berlin) v 24 n 11 Nov 1970 p 585-7 CODEN: BAZTA

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), ASBESTOS CEMENT, COMPOSITE MATERIALS, LAMINATED PRODUCTS, (PLASTICS, Cellular),

CARD ALERT: 412, 415, 817

The paper describes construction details, areas of application, and the methods of installation together with the most important characteristics of the components. In German.

ID NO. - EI71X172997 172997

Void forming in concrete with expanded polystyrene

Plast, Rubbers, Text v 1 n 8 Aug 1970 p 331-2

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (CONCRETE CONSTRUCTION, Plastics Application), (PLASTICS, Cellular), (PLASTICS, Polystyrene),

CARD ALERT: 405, 415, 817

Considerations related to new techniques for void forming employed in civil engineering work on bridges, elevated highways, dock and harbor walls, dams and similar projects. Expanded polystyrene is used which is supplied in rectangular blocks and cylinder of large size. It can be easily cut and shaped to desired form. Physical and performance properties of the new material are outlined and its advantages over conventional void-forming materials are presented. Technical and economic considerations are included.

ID NO.- EI71X172834 172834

Plastics in building construction grows

Aust Plast Rubber J v 25 n 301 Aug 1970 p 9-11 CODEN: APRJA

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (HOUSES, Plastics),

CARD ALERT: 412, 415, 817

Houses and buildings of myriad shapes and sizes made of a wide range of plastic materials, from synthetic rubber to polyurethane foam, are springing up the world over, bringing a new era in architecture and construction, providing a rich and constantly expanding market for the world's plastics industry. This survey includes review of some structural plastics employed as building materials in various applications as well as of several structural member designs used in all- plastic houses.

ID NO.- EI71X171643 171643

Plastics parts in construction engineering, (Az építőipari gépészet anyag elemei)

BAROCSI M; ZSIGA F

Manyag Gumi v 7 n 5 May 1970 p 155-8 CODEN: MUGUA

DESCRIPTORS: \*BEARINGS, (BUILDING MATERIALS, Plastics), (MACHINERY, Plastics Parts),

CARD ALERT: 405, 415, 601, 817

Plastics are advantageously used as components in machines for construction, especially in such applications as bearings under severe operation conditions. Plastics bearings are more economical in price and in service life than those made of nonferrous metals used previously. In Hungarian.



ID NO. - EI71X169569 169569

Economic and technical advantages of balsa- cored reinforced plastic sandwich structures for architectural concrete forming

LIPPAY A; DESAI RR

Balsa Ecuador Lumber Corp, New York, NY

SPI Reinf Plast/Compos Div, Proc 25th Annu Tech Conf, Washington, DC, Feb 3-6 1970 Sec 20-A, 4 p

DESCRIPTORS: (\*PLASTICS, \*Reinforced), (BUILDING MATERIALS, Plastics), WOOD, COMPOSITE MATERIALS, (CONCRETE CONSTRUCTION, Forms),

CARD ALERT: 405, 415, 811, 817

A recently completed hospital in Visalia, California, exhibits a first step in the direction of utilizing very basic industrial engineering techniques in the construction of an architecturally pleasing reinforced concrete structure. The entire concept was made possible through the use of modern reinforced plastic, balsa- cored sandwich structures. A brief analysis of the value of reinforced plastic- Belcobalsa sandwich forms on the Kaweah hospital is presented. Future possibilities for new concept in construction building industry are outlined.

ID NO.- EI71X169367 169367

New building materials and methods of construction, (Neue Baustoffe und Bauweisen)

BUCK P

Bauzeitung (Berlin) v 24 n 10 Oct 1970 p 518-21 CODEN: BAZTA

DESCRIPTORS: \*BUILDING MATERIALS, CONSTRUCTION EQUIPMENT,

CARD ALERT: 405, 412, 415

General review of the development trends. Light metal construction by using long spans. Development of combination designs of aluminum and plastics. Aerated concrete for the wall and ceiling components. Increased use of silicate concrete and structural light weight concrete. Introduction of structural members made of gypsum for the supporting fraes. IN German.

ID NO. - EI71X162800 162800

Quadratic yield and strength condition and curves at different mechanical properties in tension and compression, (Kvadraticka podminka a krivky plasticity a pevnosti pri ruznych mechanickych vlastnostech v tahu a v tlaku)

SOBOTKA Z

Stavebnicky Gas v 18 n 7 1970 p 523-41

DESCRIPTORS: (\*BUILDING MATERIALS, \*Testing), (STRUCTURAL DESIGN, Stresses), STRENGTH OF MATERIALS, STRESSES,

CARD ALERT: 408, 412, 415, 421, 422

The general quadratic yield and strength criterion for materials is derived and the material stress tensor is introduced. The criterion presented results from a linear combination of the first and second invariant of the material stress tensor and applies for many building materials such as hard metals, concrete, stones, plastics and soils. 7 refs. In Slovak with English summary.

ID NO.- EI71X162730 162730

PVC as building material, (A PVC mint epitoanyag)

SZILAGYI L

Vizugyi Kozlem v 52 n 3 1970 p 345-66

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (POLYMERS, Polyvinyl Chloride),

CARD ALERT: 405, 815, 817

A review of the current and expected future demand for plastics as building material. The manufacture and chemical structure of PVC and the processing of PVC powder to different products are described together with the factors affecting the strength properties of PVC. Data on the influence of temperature on the tensile strength of PVC and on the effect of water- content on the strength of emulsified PVC. 9 refs. In Hungarian with English summary.

Surface materials

Appl Plast v 13 n 4 Aug 1970 p 14-15 CODEN: APTCA

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (PLASTICS INDUSTRY, United Kingdom),

CARD ALERT: 415, 817

Survey of new plastics applications as component in surfacing materials. Copper- clad laminates are used for the printed circuit boards of the new color TV receiver. Colored GFRP sheets have been employed in cladding panels for the cooling tower and the entire sign work throughout the civic center of one of the great industrial cities. All- weather signs are produced in plastics by an interlamine printing technique. A feature of these signs is the provision of a removable panel beneath the crest and designation. Decorative plastic paneling and plastics- surfaced sheet materials described in a booklet.

ID NO.- EI71X059752 159752

Behavior of wood and synthetic materials under repeated load

IVANOV YUM

Central Res Institute for Building Structures, Moscow

Int Symp on Effects of Repeated Loading of Materials and Structures,

RILEM and Insituto de Ingenieria v 3 Sept 1966, 13 p

DESCRIPTORS: (\*BUILDING MATERIALS, \*Testing),

CARD ALERT: 000

The experimental results of construction material recovery after unloading of real loads such as snow, wind, seismic loads and moving loads are reported. It was concluded that the recovery of material at unloading in repeated load cycles accelerates the failure of wood and synthetic materials, including glass- fiber reinforced plastics. 10 refs.

ID NO.- EI71X058666 158666

Markets- 1969

Mod Plast v 47 n 1 Jan 1970 p 81-96 CODEN: MOPLA

DESCRIPTORS: \*PLASTICS, (AUTOMOBILE MATERIALS, Plastics), (BUILDING MATERIALS, Plastics), (PACKAGING MATERIALS, Plastics), (PLASTICS, Agricultural Applications),

CARD ALERT: 413, 622, 694, 817, 821

Report on plastics consumption in various industries. Plastics continued to score sizable gains in all the industries it serves, opening many new markets during the year but also increasing its share in most of the well- established applications. Survey includes specifically the following fields of applications- packaging, building construction, electrical/electronic, appliances, transportation, furniture, housewares, toys, agriculture, recreation, medical, and military. Report contains figures that depict growing trend and development of new markets for specific plastics to

ID NO. - EI71X058665 158665

Plastics applied

Appl Plast v 13 n 4 Aug 1970 p 26-7 CODEN: APTCA

DESCRIPTORS: \*PLASTICS, (ROAD MATERIALS, Plastics), (BUILDING MATERIALS, Plastics),

CARD ALERT: 406, 415, 817

Some newly introduced specialty applications of plastics includes polycarbonate transparent cover for protecting lunar dust; metallized plastics badges made of polymer PVC laminate; use of expanded polystyrene boxes for meat delivery for marooned sailors; polymer-based jelly strip as a bird repellent; epoxy resin mortar nosings and polyvinyl acetate strip sealants employed in the highway surface repair; and prestressed acrylic staircase.



ID NO. - EI71X057666 157666

Plastics foam. Polystyrene insulates concrete roofs

Appl Plast v 13 n 2 Apr 1970 p 9 CODEN: APTCA

DESCRIPTORS: (\*PLASTICS, \*Cellular), (PLASTICS, Polystyrene), (BUILDING MATERIALS, Plastics), (HEAT INSULATING MATERIALS, Plastics),  
CARD ALERT: 413, 415, 817

Three examples of applications of expanded polystyrene as insulating material in construction building are briefly described. A 3- cm layer of extruded foam proved the most economical and efficient method of insulating concrete roofs of two factory buildings in Italy. The entire floor area of a new, 1million cu ft cold store erected in the United Kingdom has been insulated with extruded polystyrene foam with closed cell structure. The same material has been employed for the insulation of the 27,000 sq m concrete suspension roof of a jumbo hangar in Frankfurt Airport. Brief description of techniques employed is included.

ID NO. - EI71X054655 154655

Application of glass reinforced plastics in structural engineering  
FOLIE GM

Univ of New South Wales, Australia

J Inst Eng, Aust v 42 n 9 Sept 1970 p 107-11 CODEN: JISGA

DESCRIPTORS: (\*BUILDINGS, \*Plastics Applications), (BUILDING  
MATERIALS, Plastics), (PLASTICS, Reinforced),

CARD ALERT: 402, 415, 817

Behavior and characteristics of reinforced plastics and their use for structural elements in buildings are discussed. The general properties of the constituent materials of the resin and glass are indicated. The importance of the glass resin bond, the physical form of the reinforcement used, as well as the influence of the glass and resin on the mechanical properties of the composite. 31 refs.

ID NO.- EI71X154650 154650

Development of plastics in building and associated fire hazards

JOBLING P

Inst Fire Eng Quart v 30 n 79 Sept 1970 p 323-31 CODEN: IFEQA

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (BUILDINGS, Fire Protection),

CARD ALERT: 415, 817, 914

Discussion of the application of plastics materials in the building industry and their performance in fires deals with combustibility and testing of plastics. Examples of application of self extinguishing plastics modified by the use of additives, including flame retardants.

ID NO. - EI71X053924 153924

Plastics at CONSTRUCTA 1970, (Kunststoffe auf der CONSTRUCTA 1970)

Gummi, Asbest, Junstst v 23 n 5 May 1970 p 525-7

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (PLASTICS INDUSTRY, Exhibitions), (CONSTRUCTION INDUSTRY, West Germany),

CARD ALERT: 405, 415, 417

Report on the Exhibition of the International Construction Industries in West Germany, with particular attention given to plastics structural members shown at exhibition which have been made entirely or partly of plastics. Topics of the show included- protection of new constructions by addition of polymers to construction coating materials; sealers mixtures and sealants in the profile form; flat sealants; structural members from cellular plastics; PVC for fascia panels and window frames; and use of plastics in piping and plumbing fixtures. In German.

ID NO.- EI71X053368 153368

Rational modular building technology with plastics construction elements- 1

Rationell elementbyggnadsteknik med byggplastelement

O. JONSSON, E. MILASZEWSKI

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (HOUSES, Prefabricated), (PLASTICS, Cellular), (PLASTICS, Polyvinyl Chloride), (PLASTICS, Polyurethane),

CARD ALERT: 415, 817

Plastvarlden v 19 n 9 Sept 1969 p 56- 9; New building methods and systems made possible by plastics are contrasted with former '%stone on stone%' principle. Authors predict industrialized building, in which construction of houses may be accomplished at element factory, for erection at sites desired. Plastics considered include cellular forms of phenolformaldehyde and urea- formaldehyde resins, polystyrene, PVC, and, especially, polyurethane. In Swedish.

ID NO.- EI71X053210 153210  
Soundproof building materials, 1970

RANNEY MW

Noyes Data Corp, Park Ridge, NJ, 1970, 217 p

DESCRIPTORS: \*BUILDING MATERIALS, PERLITE, PLASTICS, (BUILDINGS, Sound Insulation), GLASS FIBER, MINERAL WOOL,  
CARD ALERT: 402, 412, 413, 505, 751, 812

The increasing use of soundproof ceiling tile, wallboard and special items such as flexible room dividers, and special doors, as the result of research efforts over the past 10 to 15 yr. A number of processes have been patented, relating to the use fibrous glass, mineral wool, and fiberboard, but gypsum, perlite, ceramics, and plastics have been studied in detail for this use. The book summarizes pertinent United States patent literature through March 1970 relating to soundproofing processes and techniques for shelter construction. The book is divided into the sections of fibrous glass and mineral wool; fiberboard; gypsum, ceramic and perlite; plastic products; and general processes.

ID NO. - EI71X153158 153158

Foamed plastics find a host of applications

Progr Plast v 12 n 5 May 1970 p 29-32 CODEN: PRPAB

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (PLASTICS, Cellular),  
(PLASTICS, Polyurethane),

CARD ALERT: 415, 817

Considerations of the role and function of plastics foams when used in the construction building industry. The principal use of cellular plastics in most building applications is to function as an insulation against heat flow. However, the rigid foam plastic materials are more than just insulation; they exhibit characteristics that can be combined in a building composite or system that is both economical and better than conventional methods of construction. Example of 43-stories high building in which the perimeter walls are all insulated with urethane foam and the roof is urethane foam under hot pitch and tar. Application techniques for foam in construction are briefly described.

ID NO.- EI71X052946 152946

Proposal. Furnishing an apartment with expanded polystyrene, (Una proposta. Arrendare con il polistirene espanso)

Mater Plast Elastomeri v 36 n 3 Mar 1970 p 304-9 CODEN: MPELA

DESCRIPTORS: (\*PLASTICS, \*Polystyrene), (BUILDING MATERIALS, Plastics), (FURNITURE MANUFACTURE, Plastics), (PLASTICS, Cellular),

CARD ALERT: 402, 535, 811, 817

To show how plastic materials stimulate the imagination of artists, the example of the Italian painter L. Schenal is given, who '%arranged%' an apartment in a 17th century palace and a night club, using exclusively cellular polyurethane blocks and slabs. Numerous illustrations are presented showing that everything from ceiling, walls, doors, etc, to beds, tables, lamps and other furniture, is made of polystyrene. In Italian.



ID NO.- EI71X052577 152577

Communications. Magnetic tape and plastic films

BUCHANAN JA

Ampex Corp, Redwood City, Calif

SPI Nat Plast Cne Proc, 1968m, annu Conf by SPI held Nov 12-15 1968,  
Chicago, Ill. Soc of Plast Ind, 1969 p 159-64

DESCRIPTORS: (\*PLASTICS, \*Film), MAGNETIC TAPE, (PLASTICS, Polyester  
) ,

CARD ALERT: 000

General considerations of role that magnetic tape recording plays in communications process which is the transfer of facts and concepts, words, pictures, ideas and emotion from one person or place to another. Plastics are used as base film in manufacture of magnetic tape recording, with polyethylene terephthalate and cellulose acetate films as most important materials used in practical applications. Physical properties of base films and performance requirements for them. Economic aspects of magnetic tape recording industry, scope of applications for magnetic tapes, and forecast for the future.

ID NO.- EI71X052573 152573

Maintenance and construction applications for epoxy formulations  
DELMONTE J

Furane Plastics Inc, Los Angeles, Calif

SPI Nat Plast Conf Proc, 1968. Annu Conf by SPI held Nov 12-15 1968,  
Chicago, Ill. Soc of Plast Ind, 1969 p 114-16

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (PLASTICS, Epoxy),

CARD ALERT: 000

Brief review of epoxy resins applications in building with pointing out to some of their specific uses. Survey of those qualities of epoxies and their processing characteristics, which set them apart from other plastics competing in the building and construction industry, such as adhesion, ability to cure at prevailing atmospheric conditions, ease of formulation for specific applications, and durability and permanence. Applications in flooring, walls and structures, and pavements are discussed in some detail and many other uses are listed in an abbreviated fashion.

ID NO.- EI71X051386 151386

Air- supported buildings, movable but durable, made of plastics,  
(Pneumatische- structuren gebruikt als gebouwen)

Belg Plast n 7 May 1970 p 31, 33-6

DESCRIPTORS: (\*BUILDINGS, \*Air-Supported), (BUILDING MATERIALS,  
Plastics),

CARD ALERT: 402, 415, 817

Survey of types of construction as well as of manufacturers of  
inflatable structures in various European countries. Survey includes  
materials employed, design consideration, manufacturing procedures and  
utilization of ready- for- use air- supplied buildings. Several  
constructions are described and illustrated by photos. In Flemish.

ID NO.- EI71X051276 151276

Cupola made of sandwich construction with plastic foam core, (Een sandwich- structuur koepel met synthetische vulling)

Belg Plast n 7 May 1970 p 28-9

DESCRIPTORS: (\*BUILDINGS, \*Design), (BUILDING MATERIALS, Plastics), (ROOFS, Prefabricated),

CARD ALERT: 402, 415

Description of a semispheric roof employed in one of new exhibition buildings in Hanover. Diameter of cupola is 45 m; it consists of 40 prefabricated structural elements made of two outside steel sheet skins and polyurethane foam internal core. This construction is compared with cupola over Aya Sofia Temple is regard to core and weight. Brief description of technique employed is also included. In Flemish.

ID NO.- EI71X051182 151182

Bridge expansion joint sealants

GUNDERSON BJ

Highw Res Rec n 320 1970 p 9-19 CODEN: HIRRA

DESCRIPTORS: (\*BRIDGES, \*Joints), SEALS, (BUILDING MATERIALS, Plastics), (JOINTS, Sealants),

CARD ALERT: 401, 408, 601, 619, 817

Of the materials tested in the field, seals of polyurethane and neoprene have shown the best results. The cast-in-place polyurethane seals, if properly installed, will effectively seal joints having up to 1/2 in. of movement. A '%movement-rating' system, which determines the movement capability, was developed for preformed elastomeric joint seals.

ID NO.- EI71X051149 151149

New development in applications of plastics in construction buildings, (Nouveaux progres des matieres synthetiques dans le Batiment)

Belg Plast n 7 May 1970 p 3-4, 7-8, 11-12, 14-15, 17-20

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (PLASTICS INDUSTRY, Belgium),

CARD ALERT: 415, 817

Survey includes several examples of structural members made of plastics particularly of GFRP, as well as of plastics used in plumbing, thermal insulation and similar applications. Various types of all- plastic dwellings are presented and illustrated. Manugacture of window frame from extruded acetal resin profiles. Facing panels made of PVC prefabricated by thermoforming techniques. In French and Flemish.

ID NO.- EI71X051132

151132

Prefabrication and reinforced polyester, (Prefabbricazione e poliestere rinforzato)

SCHEICHENBAUER M

Mater Plast Elastomeri v 36 n 1 Jan 1970 p 99-103 CODEN: MPELA

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), PLASTICS POLYESTER, (PLASTICS, Reinforced),

CARD ALERT: 402, 817

The advantages of using reinforced polyester for both structural and nonstructural applications in industrialized building construction are discussed, especially with regard to the ease of handling, shipping, assembly, finishing and subsequent maintenance of these materials. In Italian.

ID NO. - EI71X051131 151131

Plastic materials in building components, (Le materie plastiche nei componenti dell'edilizia)

BONFIGLIO G

Mater Plast Elastomeri v 36 n 3 Mar 1970 p 296-303 CODEN: MPELA

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), PLASTICS,

CARD ALERT: 402, 817

It is estimated that about 22% of the total 1968 production of synthetic resins in Italy were used as building materials, with an ever-increasing application of polyesters, which due to their intrinsic characteristics are very suitable for this purpose. Numerous illustrated examples of plastic components in roofing, doors, windows, etc, are presented. In Italian.



ID NO.- EI71X150095 150095

Plastics as complete structural systems The effect on structural concepts and the future of construction

ZETLIN L; FASCE PE

Univ of Virginia, Charlottesville

ASCE, 1st Struc Plast Symp, Louisville, Ky, Apr 18 1969 p 5-23

DESCRIPTORS: (\*PLASTICS, \*Structural), (BUILDING MATERIALS, Plastics), (PLASTICS, Mechanical Properties), (BUILDINGS, Design), (PLASTICS, Reinforced),

CARD ALERT: 402, 415, 817

General considerations of technical and economic aspects of use of plastics components in building construction with particular attention to the behavior of these structural materials when applied to structural system. Two types of plastics applications include- substitution of material in conventional structural components, and complete structural systems. Design advantages are presented. Several examples of both types of structural applications are described and illustrated. Foresight for the future is also included.

ID NO. - EI71X049646 149646

Structural plastics. Properties and possibilities. First Structural  
Plastics Symposium, Louisville, Ky, Apr 18 1969

SYMP

ASCE, New York, NY, 244 p

DESCRIPTORS: (\*PLASTICS, \*Structural), (PLASTICS, Mechanical  
Properties), (BUILDING MATERIALS, Plastics), (CIVIL ENGINEERING,  
Research),

CARD ALERT: 401, 415, 817

The book contains papers presented at symposium conducted by the  
Committee of Plastics of the Structural Division at the National  
Structural Engineering Meeting 1969. The meeting has taken a look at  
some of the potentials of plastics materials for construction  
applications and some of the special considerations necessary to  
utilize the best properties of the materials most efficiently.  
Bibliographical data are enclosed with each paper.

Way is open for major expansion in furniture

Appl Plast v 13 n 2 Apr 1970 p 10-11 CODEN: APTCA

DESCRIPTORS: (\*PLASTICS, \*Cellular), (PLASTICS INDUSTRY, United Kingdom), (FURNITURE MANUFACTURE, Plastics), (BUILDING MATERIALS, Plastics),

CARD ALERT: 415, 535, 811, 817

Some new developments in foamed materials are described with particular attention to their uses in the manufacture of furniture. Integral skin foam systems, developed by Bibby Chemicals Ltd, enable furniture manufacturers to replace components traditionally shaped in wood or metal with parts cast from polyurethane at significant savings in overall cost. The Dunlop high resilience foams are designed for upholstery applications, the same company supplies foam for backing knitting textiles providing many advantages. '%Dulon%' made of polyether foam is designed to supercede all other types of ultra- soft upholstery. Filler strips and sealant backers in flexible polyethylene foam and rigid polyurethane foams for applications in sandwich constructions.

ID NO.- EI71X048342 148342

EXPO 70 Osaka

Mater Plast Elastomeri v 36 n 5 May 1970 p 470-9 CODEN: MPELA

DESCRIPTORS: (\*EXHIBITIONS, \*Japan), (BUILDING MATERIALS, Plastics),

CARD ALERT: 415, 817, 911

The 1970 World AFair in Osaka, Japan. The first of two articles describes and amply illustrates the role of reinforced polyester as the most interesting architectural material in the construction of the pavilion of the Italian industry at the Fair. The spectacular application of polymethyl methacrylate in building the French pavilion is discussed in the second article. In Italian.

ID NO.- EI71X048051 148051

Architects have selected plastic materials for the Fair, (Per l'Expo gli architetti hanno scelto le materie plastiche)

Mater Plast Elastomeri v 36 n 6 June 10 p 582-601 CODEN: MPELA

DESCRIPTORS: (\*EXHIBITIONS, \*Japan), (BUILDING MATERIALS, Plastics),

CARD ALERT: 415, 817, 911

An amply illustrated report is presented on the principal applications of plastic materials in the equipping of pavilions and services at Expo 70 in Osaka. This represents an interesting testimony of the importance of the new materials in the architecture in all countries. In Italian.

ID NO.- EI71X046140 146140

Solar dome house at 'Ideal Home'

Appl Plast v 13 n 2 Apr 1970 p 40 CODEN: APTCA

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (PLASTICS, Reinforced), (BUILDINGS, Design), (PLASTICS, Molding),

CARD ALERT: 402, 415, 816, 817

Brief description of the Solar Dome House, a visionary concept of how life may be lived in the future, that has been shown at Ideal Home Exhibition in London. The Dome, 40 ft in diam and 20 ft high, is produced from only two molds by a simple hand lay-up process and can be easily and rapidly assembled or moved as the panels are joined with nuts and bolt. Use intended ranges from food storage to recreational, school and health accommodation.

ID NO.- EI71X046121 146121

Rigid urethane foam may revolutionize wall construction

SPE J v 27 n 1 Jan 1971 p 15 CODEN: SPEJA

DESCRIPTORS: (\*BUILDING MATERIALS, \*plastics), (PLASTICS, Cellular),  
(PLASTICS, Polyurethane), (HEAT INSULATING MATERIALS, Foamed Products)

CARD ALERT: 413, 415, 817

Foam coating sprayed directly on the inside of exterior walls eliminates the need for sheathing and insulating batts. Making its debut in a Connecticut retirement housing development is a construction technique using rigid urethane foam in place of such traditional building materials as fiberboard sheathing, felt building paper, and batt insulation.

ID NO.- EI71X045839 145839

Hint for future building construction, (Wegweiser fuer zeitgemaesses Bauen)

Plastverarbeiter v 21 n 3 Mar 1970 p 177-89 CODEN: PLARA

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (PLASTICS INDUSTRY, Exhibitions), (CONSTRUCTION INDUSTRY, West Germany),

CARD ALERT: 405, 415, 817

Constructa 1970, an exhibition of building industry in West Germany, with its 1050 exhibitors from 17 countries, has proved to be the greatest exposition of this kind ever held throughout the world. Report on exhibits based on plastics applications presents very wide field of plastics employment as building material. List of most significant exhibitors and building novelties that have been shown by them. The exhibition with predominant participation of plastics as building material has proved plastics to have a great future potential in building market. In German.



ID NO.- EI71X044783 144783

Fabrication techniques for large acrylic structures

Brit Plast v 43 n 5 May 1970 p 106-7 CODEN: BRPLA

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (PLASTICS, Acrylic),

CARD ALERT: 415, 817

Report on development work, design and manufacturing procedure of a large curved acrylic canopy mounted on four steel poles, and covering a ceremonial dais at the Prince of Wales Investiture ceremony. Various design approaches were considered. The sandwich construction was rejected on grounds of weight and other reasons. A compromise solution was adopted in which longitudinal stress carrying ribs would be interspaced by acrylic skins, the arrangement being supported by transverse steel tubes fore and aft. Material specifications are given and production of prefabricated members are described as well as assembling procedure is outlined.

ID NO.- EI71x044708 144708

Composites news. Applications

Composites v 1 n 3 Mar 1970 p 133, 135, 137

DESCRIPTORS: (\*PLASTICS, \*Reinforced), (CONTAINERS, Plastics), (BUILDING MATERIALS, Plastics), (BOATS, Plastics),

CARD ALERT: 415, 674, 694, 817

Brief survey of new applications of reinforced plastics and other composite plastics- containing sturcture includes the following items- cabinlift bearings, unmanned experimental boat, Appollo 12 honeycomb in command and lunar modules, wire reinforced tires, storage tanks, automobile body, and filament wound tanks lined with polypropylene glass fiber fabric laminate.

ID NO.- EI71X044558 144558

Rational element building technology with building elements of plastics- 3, (Rationell elementbyggnadsteknik med byggplastelement)

JONSSON O; MILASZEWSKI E

Plastvarlden v 19 n 12 Dec 1969 p 52-7 CODEN: PLTVA

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics),

CARD ALERT: 415, 817

The last part in this series summarizes the advantages of plastics, e. g. , PVC, in building. The series is ended with short descriptions of the HBC system (Holland Building Corp in Hague), the Hoesch system (Hoesch AG, German steel manufacturer), the Shell system (Shellhhas built laboratories in Delft using this system) and the BMI system (a Swedish consulting and construction company). Detailed drawings are included. 25 refs. In Swedish.

ID NO.- EI71X042917 142917

Sanitary- chemical and hygienic investigations of gas evolution from polymeric materials in enclosed locations

GORODINSKII SM; GAZIEV GA; KOSTERINA EI; SEMENENKO EI

Plast Massy n 2 1970 p 71-4. See also English translation in Sov Plast n 2 1970 p 75-9 CODEN: PLMSA

DESCRIPTORS: (\*POLYMERS, \*Analysis), (POLYMERS, Testing), PLASTICS. Structural, (BUILDING MATERIALS, Plastics),

CARD ALERT: 415, 421, 815, 817

Results of experimental program are presented in which 50 polymeric materials were investigated which have been used in the structure of enclosed occupied sites. Layout of two apparatus employed in test procedures are given and results from measurement are tabulated. It is concluded that the basic qualitative composition of the toxic gases evolved from polymers may be forecast on the basis of the formulation, the production technology and the conditions of storage and service.  
7 refs.

ID NO.- EI71X039970 139970

Plastics sealants in building construction. 10th plastics colloquium of the South- German Plastics Center in Wuerzburg, (Bautenabdichtungen mit Kunststoffen. 10.Kunststoff- Kolloquium des Sueddeutschen Kunststoff-Zentrums in Wuerzburg)

Kunststoffe v 60 n 8 Aug 1970 p 596 CODEN: KUNSA

DESCRIPTORS: (\*BUILDING MATERIALS, \*Sealants), (BUILDING MATERIALS, Plastics), (PLASTICS, Film), (SEALS, Manufacture),

CARD ALERT: 415, 619, 817

Proceedings of six papers presented at the conference organized for architects and building engineers and related to use of sealers, putty and sealant made of polymeric materials. Uses of plastics films for sealing purposes are also included. In German.

ID NO.- EI71X039969 139969

Plastic moldings for plumbing and heating, (Formteile fuer Sanitaereinrichtung und Heizung)

SCHWABE A; DUERKOP J; BINDER G

Kunststoffe v 60 n 8 Aug 1970 p 571-6 CODEN: KUNSA

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (PLUMBING, Fixtures),

CARD ALERT: 415, 619, 817

Description of plumbing fixtures and complete bathroom units made of GFRP, acrylic resin, PVC, etc. Fuel tanks made of HDPE and GFRP for heating equipment. Legal regulations related to the use of GFRP tanks for fuel storage. GFRP fume chimneys for industrial applications. 8 refs. In German.

ID NO.- EI71X039945 139945

British okay RP for schools

Mod Plast v 47 n 9 Sept 1970 p 105 CODEN: MOPLA

DESCRIPTORS: (\*BUILDINGS, \*Facings), (BUILDING MATERIALS, Plastics),  
(PLASTICS, Reinforced),

CARD ALERT: 402, 415, 817

Milestone for RP in school construction is approval of polyester/glass panels for new British complex. Fire-retardant panels weigh about 150 lb each and are installed without the use of scaffolding. The panels were prefabricated by hand layup using a resin/glass ratio of 2.75 to 1. Each unit has a 2-mil coating of urethane paint to improve weatherability. Economic considerations are also included. Approval of fire-retardant panels for new building complex in England paves the way for future growth.

ID NO.- EI71X039916 139916

Plastics construction. Profiles, (Kunststoff- Bauprofile)

HUNDERTMARK G; DELEKAT W; UEDELHOVEN H; BINDER G

Kunststoffe v 60 n 8 Aug 1970 p 529-36 CODEN: KUNSA

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (PLASTICS, Vinyl), (PLASTICS, Extrusion),

CARD ALERT: 415, 816, 817

In this part of the review of the plastics application in construction building, there are presented and described various plastics profiles obtained by continuous extrusion or other techniques and their uses in various structural members. Rigid PVC profiles of various, sometimes highly sophisticated cross- sections, are most common materials employed in in- place manufacutre of window frames, staircases, socket ledger, etc. In German.



ID NO.- EI71X039914 139914

10,000 foam moldings a day

Mod Plast v 47 n 7 July 1970 p 85 CODEN: MOPLA

DESCRIPTORS: (\*PLASTICS, \*Cellular), (PLASTICS, Polyurethane), (TILE , Manufacture), (BUILDING MATERIALS, Plastics),

CARD ALERT: 415, 816, 817

Development of a fully automated mold cyclic system for manufacturing foamed polyurethane wood- like wall tiles. Key to the favorable economics of the system is a 120- mold processing line which enables fast speed production with mold cycle as long as 10 min. The polyurethane foam molding line is described. The carriers move first to a mold spray release station, then to the foam dispensing station; the molds are closed and passed through a heating oven; finally they move to a mold opening and part ejection station. Mold design and operation technique of the system developed are also discussed.

ID NO.- EI71X039902 139902

Photoelastic stress analysis of elastomers for use in construction  
COOK JP

Univ of Cincinnati, Ohio

J Elastoplast v 2 Apr 1970 p 108-13

DESCRIPTORS: \*PHOTOELASTICITY, (RUBBER, SYNTHETIC, Testing), (BUILDING MATERIALS, Rubber), (BUILDINGMATERIALS, Plastics),

CARD ALERT: 408, 422, 415, 817, 818

Consideration of photoelasticity which offers definite advantages in the analysis of complex shapes used in plastics and rubber in construction. It enables the analyst to see magnitude and direction of stresses, as well as location. Applications include cast-in-place joint seals, highways, butt joints, and lap joints. Topics of the articles include- theory of photoelasticity, validity and limitation of the method, specimen preparation, analysis of models, and list of applications of the photoelastic technique with elastomer. 3 refs.

ID NO.- EI71X039448 139448

Use of plastics in building from the viewpoint of the authorities,  
(Die Verwendung von Kunststoffen im Bauwesen aus bauaufsichtlicher  
Sicht)

EGGERT H; DECKER KD

Kunststoffe v 60 n 8 Aug 1970 p 580-4 CODEN: KUNSA

DESCRIPTORS: (\*BUILDING CODES, \*West Germany), (BUILDING MATERIALS,  
Plastics),

CARD ALERT: 402, 415, 817

Survey of building codes in West Germany in relation to fireproofing  
and flame retardance, as well as to test procedure of plastics  
materials employed in construction building. Particular requirements  
presented concern the application of plastic pipe and pipe fittings in  
plumbing, sewage, waste and drain pipe lines, of elastomers in bridge  
bearings, storage tanks for fuel and heating oil, etc. 4 refs. In  
German.

ID NO.- EI71X039447 139447

Floor coverings, wall facings and ceiling panels, (Bodenbelaege, Wand- und Deckenbekleidungen)

ERNST B; BRUNNER J; CONRAD KH; GRUBER H; SOMMER W; DELEKAT W

Kunststoffe v 60 n 8 Aug 1970 p 522-9 CODEN: KUNSA

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (FLOORS, Composite), (BUILDINGS, Ceilings), (BUILDINGS, Walls), (BUILDINGS, Insulation),

CARD ALERT: 402, 415, 817

In this review of plastics applications in buildings, there are discussed the following materials and their uses- PVC floor coverings; use of epoxy resins for floor covering and as bonding material in industrial floors; polyurethane foam as insulating materials in floors, walls and ceilings; wall- to- wall carpets of various design and production techniques; wall panels made of PVC and other plastics; rigid PVC plates used as decorative ceiling panels. In German.

ID NO.- EI71X039445 139445

Quality supervision of plastics building components, (Guetesicherung von Kunststoffbauteilen)

HAEUFGLOECKNER H

Kunststoffe v 60 n 8 Aug 1970 p 577-80 CODEN: KUNSA

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (BUILDINGS, Prefabricated), (BUILDING MATERIALS, Testing),

CARD ALERT: 402, 415, 817

An attempt is described aiming toward introduction of quality control system in West Germany which would afford rationalization of plastics building materials and prevent failure of buildings made of plastics materials. Examples of standardized marking of building structural parts are presented. In German.

ID NO.- EI71X039444 139444

Rigid foam as damping and stiffening material for steel sheet roofs,  
(Hartschaum als Daemmschicht und Versteifung fuer Stahlblechdaecher)

Kunststoffe v 60 n 8 Aug 1970 p 576 CODEN: KUNSA

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (ROOFS, Plastics), (PLASTICS, Cellular),

CARD ALERT: 402, 415, 817

Description of a factory roof of 52,000 sq m made in Italy in which polystyrene foam is employed as insulating material as well as a structural member in the roof construction. Two other examples of the uses of expanded plastics in roofing applications are also mentioned- a roof over a nuclear reactor in the United Kingdom and another flat roof over an airport maintenance hall in West Germany. In German.

ID NO.- EI71X039443 139443

Building- , lighting- , and furniture panels, (Bau- , Licht- und Moebelplatten)

MARTIN HD; MUELLER R; ARNTZ J; KOH G; KRUM HF; WAGNER R; SCHULTHEIS H; KERK K

Kunststoffe v 60 n 8 Aug 1970 p 498-505 CODEN: KUNSA

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (FURNITURE MANUFACTURE, Plastics),

CARD ALERT: 415, 535, 817

Commercially available materials described include- decorative plastics laminates; resin- bonded plywood, plastic- coated veneer, chipboard and asbestos plates; plastic coated metal sheet; PVC veneers; lighting fixtures made of GFRP, PVC, cellulose acetate butyrate, and polycarbonate; building and lighting panels from PMMA. In German.

ID NO.- EI71X039442 139442

Old building renovation, (Altbauerneuerung)

Kunstst-Plast v 17 n 4 1970 p 136-9 CODEN: KUPLA

DESCRIPTORS: (\*BUILDINGS, \*Restoration), (BUILDING MATERIALS, Plastics),

CARD ALERT: 402, 415, 817

Report on investigations performed in West Germany, West Berlin included, in relation to the state- of- the- art and restoration and repair of buildings which were erected before 1948. The poll encompassed 2015 owners of one-, two- and multi- family houses, with emphasis on the buildings on which substantial renovation works have been done. Results of polling are tabulated and briefly discussed in regard to plastics applications in these maintenance and repairing works. In German.



ID NO.- EI71X039262 139262

Symposium '%Plastics in building construction%', (Symposium '%Kunststoffe im Bauwesen'%)

SAECHTLING HJ

Kunststoffe v 60 n 8 Aug 1970 p 588-93 CODEN: KUNSA

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (PLASTICS INDUSTRY, Netherlands),

CARD ALERT: 415, 817

This report contains proceedings of 20 papers presented at conference held in Netherlands, 1970. The authors of the papers who came from West Germany, United Kingdom and Holland, presented recent progress in material testing and plastics application in the building industry. In German.

ID NO.- EI71X039261 139261

Building with conditioned atmospheres, plastics and structural water  
JONES A

Plast, Rubbers, Text v 1 n 3 Mar 1970 p 103, 105

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics),

CARD ALERT: 415, 817

Brief review of some new approaches to building concept and building materials with particular attention paid to utilization of simple devices for planned temperature and humidity situations, to use of plastics materials and to more advanced application of water. The wind- driven cooling system which uses wind pressure to circulate a wick through plastics pipes, carrying water upwards to drop on to a filler bed of local gravel. Structural walls containing water which is used to provide heat capacity, temperature, stability, and weight in walls. Advantages of new constructional concepts are outlined.

ID NO.- EI71X039217 139217

Plastics in construction in 1970, (Die Kunststoffe in Bauwesen der siebziger Jahre)

SCHWABE A

Kunstst-Plast v 17 n 3 1970 p 98102 CODEN: KUPLA

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (PLASTICS INDUSTRY, Exhibitions), (PLASTICS INDUSTRY, West Germany),

CARD ALERT: 415, 817

Report on and evaluation of the International Exhibition of construction industry held in West Germany at the beginning of 1970. Most important developments in applications of plastic Most important developments in applications of plastics in construction building in last few years are briefly reported and discussed in terms of steady increase of volume figures related to plastics consumption. Survey includes particularly- windows and window shades, flooring, carpet, backing, plastics pipe lines, fascia panels and load bearing constructions. Forecast for the next decade with particular attention to all- plastics houses, bath units, modular prefabricated structural members, etc. In German.

ID NO.- EI71X039214 139214

Plastics films, sheets and tarpaulins, (Kunststoff- Folien, - Bahnen und - Planen)

JABLONKA D; MEWES H; WILD H; JUNGnickel H; KOPS F; MARTIN HD; CRAMER KH; PAULSEN HR; UNGER M; MATUSCHEK D; MUELLER HP

Kunststoffe v 60 n 8 Aug 1970 p 505-21 CODEN: KUNSA

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (PLASTICS, Film), (PLASTICS, Sheet),

CARD ALERT: 415, 817

In this survey of plastics application in construction, there are discussed the following subjects- environment protection; light covering for halls and other special buildings; air- supported buildings; sealers and sealants from polyisobutylene and flexible PVC; water basins with plastic film bottoms; corrosion protection with polychloroprene sheet, etc. In German.

ID NO.- EI71X039213 139213

Plastics, rigid foam, (Kunststoff- Hartschaumstoffe)

SCHULTHEIS H; BINDER G; RUNCK W; BAUER P; SKARK L; HOFFSTADT W;  
SCHWEYM H; ZOELLNER R; KLOEKER W; GOSSENS H; WINKLER H

Kunststoffe v 60 n 8 Aug 1970 p 536-58 CODEN: KUNSA

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (PLASTICS, Cellular),  
(PLASTICS, Polystyrene), (PLASTICS, Polyurethane), (PLASTICS, Vinyl),  
CARD ALERT: 415, 817

Survey of cellular plastics employed in the West German construction building industry. Review includes- rigid PVC foam; expanded polystyrene, production and application as insulation, bonding materials in mortars; polymethacryl imide foam plates and molding materials; urea and phenolic foamed materials; polyurethane rigid foam in buildings; foam and light foam/concrete based on unsaturated polyesters. 11 refs. In German.

ID NO.- EI71X038193 138193

SPI National Plastics Conference Proceedings, 1968, Annual conf of Soc of Plastics Ind held Nov 12- 15 1968, Chicago , Ill

CONF

Technomic Publ Co, Inc, Stamford, Conn, 1969, 215 p

DESCRIPTORS: (\*PLASTICS, \*Processing), (AUTOMOBILE MATERIALS, Plastics), (BUILDING MATERIALS, Plastics),

CARD ALERT: 000

Proceedings includes forty- one papers relating to development in plastics processing techniques as well as in applications of plastics. Various papers deal with trends in specific industries, e. g. , automotive, food service, furniture, electrical and electronics, transportation, etc. Other papers are concerned with applications in space flight, and medicine. One paper is on fire testing and building codes. Individual papers are indexed separately.

ID NO.- EI71X037266

137266

GRP cladding for Jumbo terminal at Heathrow

Brit Plast v 43 n 9 Sept 1970 p 94-5 CODEN: BRPLA

DESCRIPTORS: (\*PLASTICS, \*Reinforced), (BUILDING MATERIALS, Plastics), (AIRPORTS, Buildings),

CARD ALERT: 402, 415, 817

Extensive use of GFRP cladding panels at a new Jumbo Jet terminal/arrivals building which was initiated with a feasibility study on the possibility of using reinforced plastics in the first floor cladding in the new building. Factors influencing the decision to employ GFRP were the possibility of making a light weight one-piece structure, ease of forming complex shapes without at the same time increasing to any great extent the weight factor and the advantages of integral color in creating a virtually maintenance free panel. Outside and inside views of completed building and of panel with glazing in position during construction are presented.

ID NO.- EI71X036456 136456

High strength glass fiber reinforced plastics (GFRP) sandwich constructions, (Hochbelastbare Glasfaser- Kunststoff- Verbundelemente)

REINKE F

Kunststoffe v 59 n 12 Dec 1969 p 846-51 CODEN: KUNSA

DESCRIPTORS: (\*PLASTICS, \*Reinforced), (BUILDING MATERIALS, Plastics

),

CARD ALERT: 415, 812, 817, 819

This is a survey of the problems which arise in the use of high strength GRP sandwich elements under practical conditions. one main requirement is the void- free, fully continuous manufacture of the GRP outer skins, whilst another concerns the reliability and strength of the inside core and its reliable union with the outer skins. Description of test equipment used for material testing in test program which included various types of sandwich constructions with GFRP skins. Forecast for the future development in design of GFRP sandwich construction components obtained in continuous process. In German.



ID NO.- EI71X031738 131738

Use of the products of polymer science in building construction

LAUREN S

Johns-Manville Research and Engineering Center, Manville, NJ

Polymer Science. Current Concepts and Civic Applications. Conf held by Academy May 9-11 1967. Annals of N Y Acad of Sci v 155, Article 2, Jan 27 1969 p 646-56 CODEN: POLMA

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics),

CARD ALERT: 000

Many aspects affecting increasing uses and limitations of plastic applications in construction industry are discussed from technical and economic viewpoints. Some reasons of slow rate of acceptance of plastics are outlined with considerations related to several examples from practice. Evaluation of new materials for construction, weatherability of plastics as well as artificial and natural exposure tests. Polymers in specific construction end- uses, in protective and decorative coatings, #specific construction end- uses, in protective and decorative coatings, and development of coil coating. Advantages of prefabricated building materials, floor coverings, pipe and thermal insulation. Use of reinforced plastics and foamed products. Plastics and building codes considerations. 8 refs.

ID NO.- EI71X030873 130873

Fire resitant epoxy. Glass sheeting

Plast, Rubbers, Text v 1 n 4 Apr 1970 p 165

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (PLASTICS, Reinforced), (POLYMERS, Epoxy),

CARD ALERT: 415, 815, 817

Description of fire protective sheets, developed in West Germany, which consist of 1.8 mm thick flexible sheeting made from noncombustible materials, i. e., water- containing sodium silicate, glass fiber and a wire netting core, coated on both sides with epoxy resin. Material developed can be used as fire- resistant components in various sandwich panels formed from plywood chipboard etc. Application fields include- light weight dividing walls, fire resistant furniture, and fire resistant glazing.

ID NO.- EI71X029917 129917

Requirements on outer paneling, wall- and roof- lighting,  
(Anforderungen an eine Aussenverkleidung, Wand- und Dachbelichtung)

DELEKAT W

Kunstst-Rundsch v 17 n 2 Feb 1970 p 51-9 CODEN: KURUA

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (BUILDING, Facings),  
(LIGHTING FIXTURES, Plastics), (PLASTICS, Vinyl), (PLASTICS,  
Reinforced),

CARD ALERT: 415, 707, 817

Physical principles that must be taken into account when wall paneling and roofing houses with light transmitting materials are discussed. Particular attention is paid to influence of temperature and other environmental conditions. Constructional and design details, various structural members made of PVC and employed in building construction. Properties of commercial PVC plates and profiles are tabulated. Lighting walls made of glass fiber reinforced polyester prefabricated plates. Material selection considerations. Color selection and light resistance of selected materials. In German.

Report on research program related to '%the definition of properties and design principles of bathroom modules with particular attention to uses of plastics%', (Bericht ueber die Forschungsarbeit '%Definition der Eigenschaften und der Planungsgrundlagen von Sanitaerzellen unter besonderer Beruecksichtigung der Verwendung von Kunststoffen'%)

Kunstst-Rundsch v 17 n 2 Feb 1970 p 64-6 CODEN: KURUA

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (HOUSES, Prefabricated), (PLASTICS, Acrylic), (PLASTICS, Research), (PLUMBING, Fixtures),

CARD ALERT: 402, 415, 619, 817

Experimental program is described which provides for design and manufacture of several plumbing units as modular members which can be combined with each other. polymethyl methacrylate has been found as most suitable plastics for mass production by using vacuum- deep drawing techniques. Results of investigations are given together with recommendations for practical uses in building industry. In German.

ID NO.- EI71X028982 128982

Koenig modulat structures. A novel universal construction system,  
(Koenig baukasten. Ein neuartiges universelles Bau- system)

KOENIG G

Kunstst-Rundsch v 17 n 2 Feb 1970 p 59-62 CODEN: KURUA

DESCRIPTORS: (\*HOUSES, \*Prefabricated), (BUILDING MATERIALS,  
Plastics),

IDENTIFIERS: HOUSES, Modular Parts

CARD ALERT: 402, 415, 817

Description of system developed in West Germany, that has been shown  
at construction industry exposition '%Constructa 70%', at Hanover.  
Design principles of structural members which are made of various  
building materials, such as plastics, metals, wood, etc, and which  
consist of prefabricated plates and joining elements, as well as of  
windows, doors, bathroom members, plumbing fixtures, etc. Examples of  
many housing parts made of modular elements are presented and future  
possibility of their applications are outlined. In German.

ID NO.- EI71X028979 128979

Plastics in the English construction building, (Kunststoffe in englischen Bauwesen)

SCHWABE A

Inst fuer das Bauen mit Kunststoffen, Darmstadt, West Germany

Kunstst-Plast v 17 n 2 1970 p 612 CODEN: KUPLA

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (BUILDINGS, United Kingdom), (HOUSES, Plastics),

CARD ALERT: 402, 415, 817

Report on some items shown at Building Exhibition in London, with particular attention given to bathrocm features, roof gutters, pipe line, etc. Description of two 22- story buildings with fascia panels made of Indulex prefabricated sandwich structures. Many models of structural members such as foofdomes, etc, are prepared, tested and exposed to outdoor weathering. Examples of plastics uses in housing constructions with special regard to bear- loading structural elements. In German.

ID NO.- EI71X028978 128978

HL- modular units, adaptable mobile prefabricated structural members made of plastics, (HL- Baueinheiten, anpassungsfaeihige Mobilbauten aus Kunststoff)

RATH-NAGEL KJ

Kunstst-Rundsch v 17 n 2 Feb 1970 p 63-4 CODEN: KURUA

DESCRIPTORS: (\*HOUSES, \*Prefabricated), (BUILDING MATERIALS, Plastics),

CARD ALERT: 402, 415, 817

Description of modular system consisting of prefabricated plates and joining elements designed for in- place mounting and providing various possibilities by combining them with each other. Some examples of Koenig- modular system applications are described and illustrated. Commercial modular units available on the market are given and their advantages as well as application possibilities are outlined.

ID NO.- EI71X028966 128966

Plastics in construction in 1970 with regard to Constructa 70, (Die Kunststoffe im Bauwesen der siebziger Jahre mit einem Blick auf die Constructa 70)

A SCHWABE

Kunstst-Rundsch v 17 n 2 Feb 1970 p 45-50 CODEN: KURUA

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (PLASTICS INDUSTRY, Exhibitions), (PLASTICS INDUSTRY, West Germany),

CARD ALERT: 415, 817

Considerations of plastics applications in building industry in connection with construction exhibition held in Germany. Survey of development that took place in past decade is concerned with such plastics uses as windows, window-shades, flooring, carpet backing, pipe lines, fascia panels, structural members in buildings, etc. Forecast for future plastics applications in construction includes- all- plastics houses, prefabricated modules for mass production of housing units, bathrooms, etc. In German.



ID NO.- EI71X028964 128964

New fire- resistant plates with interesting properties, (Neue Brandschutzplatte mit interessanten Eigenschaften)

BREU R

Kunstst-Rundsch v 17 n 2 Feb 1970 p 69-70 CODEN: KURUA

DESCRIPTORS: (\*PLASTICS, \*Laminated), (PLASTICS, Fire Resistance), (BUILDING MATERIALS, Fire Resistance), (BUILDING MATERIALS, Light Weight),

CARD ALERT: 415, 817

Description of structural construction element developed in West Germany by BASF and shown at exhibition Constructa 70. The 1.8 mm thick flexible plate consists of nonflammable inorganic composite, namely, sodium silicate, glass fibers and wire net, coated with epoxy resin on both sides. It's specific behavior at temperatures above 200 C is outlined. This material is particularly suitable for use in combination with other construction materials, such as wood, glass, etc, as fire resistant component. It also can be used in the manufacture of fireproof furniture. In German.

ID NO.- EI71X028962 128962

ISOWAND. Sandwich techniques in building construction

Kunstst-Rundsch v 17 n 2 Feb 1970 p 71-3 CODEN: KURUA

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (PLASTICS, Cellular), STEEL,

CARD ALERT: 415, 817

Description of a new building material developed and introduced into market in West Germany. The sandwiched structural element, which is a combination of steel/rigid plastic foam/steel, is produced on continuous production line where two steel bands positioned at distance of 35 or 65 mm from each other, form outer skins bonded together with foamed plastic core, giving solid sandwich unit. Technical data are tabulated. Application techniques and examples of buildings outer coated with new material, are presented. In German.

ID NO. - EI71X027995 127995

Petrocarbona. Insulating plates for flat roof insulation,  
(Petrocarbona. Daemmplaetten fuer Flachdachdaemmung)

KunststRundsch v 17 n 2 Feb 1970 p 76

DESCRIPTORS: (\*PLASTICS, \*Polyurethane), (PLASTICS, Cellular), (ROOFS, Insulation), (BUILDING MATERIALS, Plastics),

CARD ALERT: 402, 413, 817

Properties and technical data of commercial insulating sheet materials developed in West Germany that are based on rigid polyurethane foam. Application possibilities for material developed are outlined. In German.

ID NO.- EI71X027994 127994

Prefabricated roof- insulating panels with polyurethane foam core,  
(Verlegungsfertige Dachisolierplatte mit einem Kern aus  
Polyurethanhartschaum)

Kunstst-Rundsch v 17 n 2 Feb 1970 p 73 CODEN: KURUA

DESCRIPTORS: (\*HEAT INSULATING MATERIALS, \*Plastics), (BUILDING  
MATERIALS, Plastics), (ROOFS, Insulation), (PLASTICS, Cellular),

CARD ALERT: 402, 413, 817

Brief description of sandwiched plates developed in West Germany,  
which are ready for direct use in roofing. The panel consists of  
foamed core sandwiched between outer bituminous paperboard and inner  
aluminum foil. Manufacturing techniques of plates and their  
application as insulating roofing materials, are discussed and  
technical and economic advantages are outlined. In German.

ID NO. - EI71X027993 127993

Plastics house FG 2000, (Kunststoffhaus fg 2000)

KunststRundsch v 17 n 2 Feb 1970 p 108-10

DESCRIPTORS: (\*HOUSES, \*Plastics), (BUILDING MATERIALS, Plastics), (PLASTICS, Reinforced),

CARD ALERT: 402, 415, 817

Description and design of an all plastics house developed in West Germany. Particular attention is paid to construction of walls and roof elements. Made from only 39 single prefabricated parts, the house can be erected during 11 hr, on a conventional foundation. The plastics house described is commercially manufactured and can be supplied in four variances. In German.

ID NO.- EI71X027403 127403

Fire performance of plastics in building

SCOTT KA

Brit Polym J v 2 n 5 Sept 1970 p 244-48

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (PLASTICS, Fire Resistance),

CARD ALERT: 410, 817, 914

The safe use of plastics in building from the viewpoint of fire and the performance of plastics in the framework of existing regulations are considered and the relevance of some tests are discussed. Attention is also given to smoke and toxic products.

ID NO.- EI71X024759 124759

Flammability tests with structural panels with a core of rigid polyurethane foam, (Brandproeven met bouwpanelen met een kern van hard polyurethaanschuim)

Plastica v 22 n 11 Nov 1969 p 562-4 CODEN: PLASA

DESCRIPTORS: (\*PLASTICS, \*Flammability), (PLASTICS, Polyurethane), (BUILDING MATERIALS, Plastics),

CARD ALERT: 817, 914

In many pastics, flame retardants are used in order to decrease the inflammability of these products. It is claimed that this is also the case when p%lastics meet self extinguishing standard, laid down in ASTM 1692- 59 T. In practice it appears that this is not at all the case when sandwich constructions are used, which are subjected to a certain exposure of fire. From a range of tests it was concluded that the fire resistance properties of sandwich constructions are conditioned by the type of upper and under layers and certainly not by the use of a flame retardant. On the contrary, use of flame retardants even strongly stimulates the development of smoke. In Dutch.

ID NO.- EI71X021154 121154

Plastic- rigid foams and rigid- foam- light concretes, (Kunststoff- Hartschaumstoffe und Hartschaum- Leichtbetone)

SCHWABE A; KNAPPKE G

Kunstst-Plast v 17 n 1 1970 p 7-11 CODEN: KUPLA

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (PLASTICS, Cellular), (CONCRETE PRODUCTS, Manufacture),

CARD ALERT: 412, 415, 817

Survey of rigid cellular plastics available on the market with listing of their manufacturers and the most important physical and mechanical properties. The scope of construction applications of foamed plastics is given with particular attention to in- place foaming techniques which use is in a steady growing. Possibility of manufacture and application of composite materials, obtained by in- place techniques and consisting of foamed plastics mixed with cement. Advantages of an dorecast for the uses of plastic- based light concretes in various building and road constructions. In German.



ID NO.- EI71X018916 118916

The largest roof in Europe that has thermal insulation made of rigid polystyrene foam, (Das groesste Dach Europas, waermegedaemmt mit Hartschaumplatten aus Styropor)

BALKOWSKI D

Kunstst-Plast v 17 n 1 1970 p 12-13 CODEN: KUPLA

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (BUILDINGS, Insulation), (PLASTICS, Cellular), (PLASTICS, Polystyrene),

CARD ALERT: 402, 415, 817

Design of roof and its construction with detailed description of insulating materials used and their laying into place during execution of the construction program. This flat roof was placed over a factory hall of 378x177 m in Vienna, Austria. Advantages of roof insulated with cellular plastic are outlined and details of construction are presented. In German.

ID NO.- EI71X018915 118915

Prefabricated glass fiber reinforced plastics sashes for acrylic lighting coupolas, (Vorfabrizierte GFK- Zargen fuer Lichtkuppeln aus Acrylglas)

SCHAER J

Kunstst-Plast v 17 nl 1970 p 15 CODEN: KUPLA

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (ROOFS, Plastics), (PLASTICS, Reinforced),

CARD ALERT: 402, 415, 817

Design and description of sash developed in West Germany as prefabricated part in flat roof construction. Advantages of reinforced plastic sash over those made of conventional materials. In German.

ID NO.- EI71X018914 118914

Sign of things to come

Progr Plast v 12 n 1 Jan 1970 p 23 CODEN: PRPAB

DESCRIPTORS: (\*HOUSES, \*Plastics), (PLASTICS, Vinyl), (PLASTICS, Cellular), (BUILDING MATERIALS, Plastics),

CARD ALERT: 402, 415, 817

Description of the '%House For Today%' that has been shown at the 1969 Ideal House Exhibition, Olympia, London. It has been made of specially developed rigid low density PVC foam material manufacture in the United Kingdom. The design of the house is based on panels constructed to a 4- ft sq module. These panels can be neoprene zipped together to form a house of virtually any dimension. PVC foam is used as the core material bonded to two skins of aluminum sheet which in turn receive a covering of plastic. Construction of house on display is described and advantages of PVC foam developed for building applications are outlined.

ID NO.- EI71X012530 112530

Use of epoxy resins as construction variables, (Anwendung von Epoxidharzen im Bauwesen)

BUSER K

Bauzeitung (Berlin) v 24 n 6 June 1970 p 310-13 CODEN: BAZTA

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (POLYMERS, Epoxy), (ROAD MATERIALS, Plastics),

CARD ALERT: 405, 406, 815, 817

Properties, manufacture, and methods of application. Use of various epoxy materials for the floor covering. Application of epoxies in concrete road construction for gluing concrete and for patching cracks and wearing surfaces. Construction of the transverse joints and insulating coatings. Applications in the bridge construction. In German.

ID NO.- EI71X012524 112524

What's ahead in the housing materials and systems

SIMPSON JR

Office of Building Technol, Washington, DC

SPI, 27th Annu Conf, Western Sec, Coronado, Calif, Manage & Market  
Pap, May 27-29 1970 Sec 2, 1 p

DESCRIPTORS: (\*PLASTICS INDUSTRY, \*Western United States), (BUILDING  
MATERIALS, Plastics),

CARD ALERT: 415, 816, 817

Abstract only.

ID NO. - EI71X012395 112395

EPCOT. Experimental prototype city. The challenge to plastics

GRAVES S

SPI, 27th Annu Conf, Western Sec, Coronado, Calif, Manage & Market  
Pap May 27-29 1970 Sec 2, 1 p

DESCRIPTORS: (\*PLASTICS INDUSTRY, \*Western United States), (BUILDING  
MATERIALS, Plastics),

CARD ALERT: 415, 816

Abstract only.

ID NO.- EI71X012394 112394

New concept in living. A home of composite materials

FEHER S

SPI, 27th Annu Conf, Western Sec, Coronado, Calif, Manage & Market  
Pap May 27-29 1970 Sec 2, 1 p

DESCRIPTORS: (\*PLASTICS INDUSTRY, \*Western United States), (BUILDING  
MATERIALS, Plastics),

CARD ALERT: 415, 816

Abstract only.

ID NO.- EI71X012388 112388

Plastics in the bathroom market. Reinforced plastic bathroom components. A look at the future.

SPI, 27th Annu Conf, Western Sec, Coronado, Calif, Manage & Market Pap May 27-29 1970 Sec 2, 1 p

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (PLASTICS, Reinforced),

CARD ALERT: 415, 817

Abstract only.



ID NO.- EI71X012383 112383

Polymers in adverse environments

ESHENAUER RE

General Electric Co, Louisville, Ky

Plast Polym v 37 n 131 Oct 1969 p 401-10 CODEN: PLPOB

DESCRIPTORS: \*PLASTICS, (BUILDING MATERIALS, Plastics), (AGRICULTURAL MACHINERY, plastica Applications), (PACKAGING MATERIALS, Plastics), DOMESTIC APPLIANCES,

CARD ALERT: 415, 694, 817

Plastics are now being devised for use in more and more adverse environments. In building construction these consist of exposure to outdoor conditions, drain and vent effluents, mechanical and thermal stresses; in transport vehicles to outdoor conditions, mechanical and particularly fatigue and abrasive loads, petrol, salt, oil and severe thermal stresses, with water added in marine applications; in agriculture to chemical and biological effects in addition; in electronics, in packaging, in toys, in luggage and in household appliances to numerous adverse influences. 19 refs.

ID NO.- EI71X011306 111306

Rational element building technology with building elements of plastics- 2, (Rationell elementbyggnadsteknik med byggplastelement)

JONSSON O; MILASZEWSKI E

Plastvarlden v 19 n 10 Oct 1969 p 67, 69, 71 CODEN: PLTVA

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (BUILDINGS, Stresses)

CARD ALERT: 415, 817

Calculations of deflection of building element, and of shear stress between core and covering layers, are discussed. In Swedish.

ID NO.- EI71X009808 109808

Plastics and plastics products at Constructa 1970, (Kunststoffe und Kunststoffherzeugnisse auf der Constructa 1970)

SAECHTLING H

Kunststoffe v 60 n 3 Mar 1970 p 164-70 CODEN: KUNSA

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (PLASTICS INDUSTRY, West Germany), (PLASTICS INDUSTRY, Exhibitions),

CARD ALERT: 405, 415, 817

Report on International Exhibition of Construction Industries in West Germany with particular attention given to various applications of plastics materials. Survey of building components made of glass fiber reinforced plastics, cellular plastics, prefabricated extrudates (window frames) and moldings, sandwich construction, fascia panels, roofing, thermal insulation, pipe and plumbing fixtures, etc. Economic considerations of present situation and insight for the future. About 30% of plastics produced is used in construction building, but this amounts to only 1% of all construction materials actually employed in building industry. In German.

Plastics applied

Appl Plast v 13 n 1 Jan-Feb 1970 p 27-9 CODEN: APTCA

DESCRIPTORS: (\*PLASTICS INDUSTRY, \*United Kingdom), (BUILDING MATERIALS, Plastics), (FURNITURE MANUFACTURE, Plastics),

CARD ALERT: 415, 535, 811, 817

Some special uses of plastics in different applications. The Swedish designed inflatable '%sportsdome%' which consists of plastic skin of parabolic section with translucent panels. Inflated nylon '%air tent%' as a temporary paint shop. Polyethylene sacks for refuse collection. Colored high density polyethylene was employed in stadium seats. Polyethylene sheeting for house and garden. Nearing the all-plastic caravan (sport-trailer) using vacuum formed ABS sheets. Scottish sculpton uses expanded polystyrene. The fascia assembly of the family car made of ABS. Polystyrene replaced conventional wood in the manufacture of spools. Propylene has been chosen as the material for the shells of a new range of school chairs.

ID NO.- EI71X009479 109479

Surfacing materials

Appl Plast v 13 n 1 Jan-Feb 1970 p 18 CODEN: APTCA

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (PLASTICS INDUSTRY, United Kingdom),

CARD ALERT: 415, 817

Brief description of some applications of plastics as coating materials in the United Kingdom. Rigid PVC sheeting is employed for illuminating ceiling panels in shopping centers, factories, large office and public buildings providing excellent lightness and translucent. Use of sheets of a tough, decorative laminate veneer bonded to chipboard, with a veneer on the reverse, to provide a gaily-colored floor- to- ceiling splashback to a series of mini- washbasins at schools. Formica decorative laminate has been used in the streamlined interior of Pan Am's new town terminal in London. Development of two new surfacing materials for internal and external applications obtained from paper coated with polyester resin, with or without addition of glass fiber mat.

ID NO.- EI71X009478 109478

News of materials

Appl Plast v 13 n 1 Jan-Feb 1970 p 21 CODEN: APTCA

DESCRIPTORS: \*PLASTICS, (BUILDING MATERIALS, Plastics),

CARD ALERT: 415, 817

Some new developments of new materials in the United Kingdom. A new design of polyethylene matting for industrial and commercial use is made of four standard parts that can be assembled into continuous mats of any size. Nonlubricated bearings lined with a fabric made of polytetrafluoroethylene fibers are used as a standard equipment for the tilt jacks of FOER 9 fork- lift trucks. Structural honeycomb made from phenoliccoated aromatic polyamide fiber which exhibits high heat resistance; honeycomb only chairs at over 500 C, retaining its structural identity when charred. Development of polyprepylene- based compound for antistatic castors fitted to an extensive range of mobile equipment.

ID NO.- EI71X008215 108215

Marketing reinforced plastics in the building and construction industry

POWELL D

Polyplan Ltd, Leicester, England

Plast Polym v 37 n 130 Aug 1969 p 301-7 CODEN: PLPOB

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (PLASTICS, Reinforced

),

CARD ALERT: 415, 817

Ever since its inception in the United Kingdom, the reinforced plastics industry has examined every possible application in building, in order to utilize surplus production capacity, but dynamic marketing efforts have usually been absent. Over 20% of the entire production of plastics in 1967 went into the building industry in one form or another. The No. 1 material was PVC (70,000 t). While polyester at about 10% of this usage (7500 t) came fifth on the list. Roof lighting accounted for two-thirds of the polyester total but consisted of an assortment of translucent applications, e. g. barrel vaults, domes, corrugated sheet, and insulated dead lights. A reliable forecast is of 20,000 t of polyester in 1975. Some suggestions for deeper market penetration. 15 refs.

ID NO.- EI71XC06810 106810

Improved plastics building system for shell laboratory

British Plastics v 42 n 8 Aug 1969 p 61-2

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (PLASTICS, Vinyl), (PLASTICS, Polyurethane), (PLASTICS, Cellular),

CARD ALERT: 415, 817

A building system based on a combination of conventional materials, such as steel for columns and clamping profiles and plastics for wall panels and partition walls has been developed. The system is designed for great flexibility allowing for the adaptation of layout to changing requirements. Application of plastics materials in building system developed includes- PVC, epoxy, polyurethane foam, polypropylene, high- and low- density polyethylene, and vinyl ester emulsion paint. Profiles, shaft sheeting, floor covering and air ducts are made of PVC. Epoxy resins found applications in column panels, ground floor and cellar. Polyurethane foam was used for ceilings, filling of panels, door frames, etc, and insulation.



ID NO. - EI71X005390 105390

Huge RP panel assembly transforms a city block

Mod Plast v 47 n 5 May 1970 p 50 CODEN: MOPLA

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (PASTICS, Reinforced)  
, (BUILDINGS, Facings), (PLASTICS, Polyester), (PLASTICS, Decoration),  
CARD ALERT: 402, 415, 817

Use of backlighted, self-extinguishing glass fiber reinforced plastic panels, that have been decorated to look like leaded stained glass, in a giant false front that simulated a dozen three-story buildings. Each of the 30-ft high buildings that makes up to 260-ft long facade consists of four sections. Full-scale drawings were made of each of these, and translucent RP panels, 1/8 in. thick and of different sizes, were assembled to metal frames and placed over the appropriate sketch. The stained-glass effect was achieved by means of simple dispensing equipment and of a proprietary polyester formulation.

ID NO.- EI71X005387 105387

Plastics in building and construction towards the end of the century  
SLEDDON GJ

Brit Plast v 43 n 1 Jan 1970 p 78, 81-3 CODEN: BRPLA

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (BUILDINGS, Design),  
CARD ALERT: 402, 415, 817

Considerations of development trends in the uses of plastics materials in construction building industry with discussion of factors which will influence the course of developments. Foresight for the future is based on analysis of the present situation with outlining the most influential factors as well as on evaluation of the statistical data. Development trends in consumption of several most commonly used polymers with forecast for 1975 and speculation for 1995. Examples of space enclosures that are provided by high domes made of plastic sheets, are presented and discussed in terms of most important trend in the new approach to resolving of urban problems.

ID NO.- EI71X003954 103954

Use of urea- formaldehyde resins in pile foundations

MULYUKOV EI

Plast Massy n 6 1969 p 58-9. See also English translation in Sov  
Plast n 6 1969 p 54-5 CODEN: PLMSA

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), UREA, POLYMERS, (PLASTICS, Curing),

CARD ALERT: 415, 803, 815, 817

Results from experiments performed with urea- formaldehyde resin on improvement of construction work and mechanical strength of mine piles. It has been proved that simultaneous feed of an aqueous solution of M- 60 urea formaldehyde resin with hydrochloric acid hardener eases the driving of reinforced concrete piles in clayey soil by 40 to 50% and improves the bearing capacity by 30 to 40%. The advantages in cost and other ways are considerable.

ID NO.- EI71X002791 102791

Economics of the use of plastics in building

LARIN IA; SIDOROVA NA

Sov Plast n 9 1969 p 16-20 CODEN: SOPLA

DESCRIPTORS: (\*PLASTICS INDUSTRY, \*Soviet Union), (BUILDING MATERIALS, Plastics),

CARD ALERT: 415, 816

A survey is given of the trends, inside and outside the Soviet Union, of the development and use of plastics in the building industry. Several statistical data and forecast for the future are included.

ID NO.- EI71X001171 101171

Plastics, fire, and corrosion, (Kunststoffen, brand, corrosie)

WESSELS EC

Plastica v 22 n 8 Aug 1969 p 338-44 CODEN: PLASA

DESCRIPTORS: (\*PLASTICS, \*Flammability), (PLASTICS, Deterioration), (POLYMERS, POLYVINYL Chloride), (BUILDING MATERIALS, Fire Resistance),

CARD ALERT: 402, 413, 815, 914

This situation report with special reference to PVC presents widely diverging views about fire dangers of PVC applications in buildings. In Western Germany, insurers war against corrosive action of HCl, liberated from PVC under fire conditions, on structures, materials, and goods, while PVC manufacturers tend to downplay damaging effects. Results of the recent Stockholm symposium on the subject are discussed. Corrosion of buildings does not need to be as serious as has been suggested in the literature; damagability of machines and instruments by HCl can be high; adequate preventive measures can be taken. Corrosive gases arising from combustion of 1 lg PVC may be neutralized by 2000 to 2000 liters ordinary water. Contraindications of foam and halogen containing extinguishers are listed. In Dutch.

ID NO.- EI70X159903 059903

Design of constructions of polyester fiberglass with consideration of aging

BOKSHITSKII MN; BUDANOV VD

Chem & Petroleum Eng (English translation of Khimicheskoe i Neftyanoe Mashinostroenie) n 9-10 Sept-Oct 1968 p 833-7

DESCRIPTORS: (\*PLASTICS, \*Reinforced), (PLASTICS, Aging), (BUILDING MATERIALS, Plastics), (PLASTICS, Polyester),

CARD ALERT: 000

Plastic parts in tools, machines, and constructional elements are often under aging conditions. This problem is considered with application to polyester fiberglass plastic, although the results obtained can be used for a whole series of polymeric materials. Although a clear, but quantitative connection between the change in weight of polyester fiberglass (from water absorption) and its strength does not exist, there is apparently a qualitative correlation. At low temperatures (20 to 40 C) the weight of samples initially increases, then falls off again and becomes stabilized at a certain level. For higher temperatures, the form of the curves remains one of the graphs for change in strength. Apparently water which penetrates the material subjects the binder to hydrolysis and also extracts low-molecular weight components from it; therefore the weight of the samples decreases. The weakening action of water is also associated with the negative effect it exerts on the filter, and also on the adhesion bonds between the binder and the fiberglass. This process is particularly intense at the initial moment, in the nonsteady aging region, while later it is hardly noticeable. Formulas are given for estimating the strength of various items of polyester fiberglass under aging conditions.

ID NO.- EI70X159288 059288

Reinforced plastics applications, 1969

Appl Plast v 12 n 12 Dec 1969 p 43-4, 46 CODEN: APTCA

DESCRIPTORS: (\*PLASTICS, \*Reinforced), (PLASTICS INDUSTRY, United Kingdom), (BUILDING MATERIALS, Plastics),

CARD ALERT: 415, 816, 817

Survey of most important development in the United Kingdom. New type of reinforced plastics pipe employed in district central heating. The entire first floor of a large new building has been formed by 64 panels prefabricated of reinforced polyester. Development of a range of thixotropic polyester resins, specifically designed for marine applications. The first line of glass fiber reinforced thermoplastics polyester resins designed for injection molding to be produced has been announced by one of resin suppliers. This material is flame resistant with self extinguishing properties.

ID NO.- EI70X157185 057185

RP in building. What's new overseas

WOOD AS; KESTLER J

Mod Plast v 47 n 2 Feb 1970 p 50-4 CODEN: MOPLA

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (PLASTICS, Reinforced), (HOUSES, Plastics),

IDENTIFIERS: PLASTICS, GFRP

CARD ALERT: 402, 415, 817

Reviewing of recent development and new design ideas related to building construction using glass fiber reinforced plastics as building materials. Survey includes- modular panels that face new building in Brussels, Belgium. New office building in England which consists of 39 prefabricated sections weighing 3500 lb each, measuring 30x9x2 ft. All- glass fiber reinforced plastics house units which may serve as single- family dwellings or be combined to make apartment houses, hotels, etc (France). Other examples of new design ideas are taken from West Germany, Italy, Benelux and Japan. Survey includes statistical data related to applications of reinforced plastics in building industry.



ID NO. - EI70X156525

056525

Building products star at Scanplast

Mod Plast v 47 n 3 Mar 1970 p 67, 69 CODEN: MOPLA

DESCRIPTORS: (\*PLASTICS INDUSTRY, \*Exhibitions), (PLASTICS INDUSTRY, Scandinavia), (BUILDING MATERIALS, Plastics),

CARD ALERT: 415, 817

Brief report on Plastics Exhibition held in Sweden in 1969 with particular emphasis on development of plastics applications in construction buildings. Materials pushed machinery out of the spotlight and several outstanding materials developments, especially in exterior panels, wall covering and sheeting have proved to be of great interest for construction industry. Polyester is combined with stone giving new exterior building panels bringing considerable savings. Allplastics Futuro house made of polyurethane foam sandwiched between reinforced polyester skins was one of the most popular exhibits at Scanplast. Some packaging applications of plastics are also presented in the report.

ID NO.- EI70X156460 056460

Systems building could provide new door to construction field

Progr Plast v 11 n 12 Dec 1969 p 25-8 CODEN: PRPAB

DESCRIPTORS: (\*BUILDINGS, \*Prefabricated), (BUILDING MATERIALS, Plastics),

CARD ALERT: 402, 415, 817

Considerations related to introduction of industrialized building systems in North America. Advantages of these systems, that have been proven in Europe to be successful. High degree of mechanization, and reduction of on-site labor. Standardization of components and products. Dimensional coordination and control. Integration of building team as architect, engineer, fabricator, contractor and client. More sophisticated use of management techniques within building industry. Listing of companies performed pioneering work in Canada and United Kingdom, with description of manufacture of prefabricated structural members by using plastics materials.

ID NO. - EI70X155709 055709

Plastics in building

DIETZ AGH

Massachusetts Inst of Technol, Cambridge

ASME, 2nd Interamerican Conf Mater Technol, Mexico City, Mexico, Aug  
24-27 1970 pt 1 p 160-74

DESCRIPTORS: (\*PLASTICS, \*Structural), BUILDING MATERIALS,

CARD ALERT: 415, 817

Plastics are employed in building as semi- structural or structural components, in non- structural applications, and as auxiliaries to other materials. When employed structurally, they are reinforced with materials such as glass fiber to impart strength and stiffness. There are many non- structural applications, including floor and wall covering, lighting, piping, insulation, vapor barriers, hardware, and many others.

ID NO.- EI70X155674 055674

Modular bathroom made of plastics- 2, (Sanitaerzellen aus Kunststoff)

KNAPPKE G

Kunststoffe-Plastics v 16 n 10 1969 p 393-7 CODEN: KUNSA

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (HOUSES, Prefabricated),

CARD ALERT: 402, 415, 817

In this continuation of previous article, design principles of plastics parts are outlined in relation to German Standard DIN 18022; design of various modular members and their use in bathrooms in relation to standard dimensions and shapes; manufacture of prototype members with use of sandwich construction and reinforced structure; water- vent- waste pipe line systems and their installation; recommendation for design of flooring. In German.

ID NO.- EI70X155672 055672

Light- cupolas in flattoped roofs. Design and building of warehouse's roof with 343 cupolas made of transparent plastic and designed as skylight, (Oberlichtkuppeln im Flachdachbau)

GERBER M

Kunststoffe-Plastics v 16 n 9 1969 p 340-1 CODEN: KUNSA

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (PLASTICS, Reinforced),

CARD ALERT: 402, 415, 817

Considerations of light and heat transmission, weather resistance and fireproofing problems; polyester resin based on HET- acid, with addition of inorganic pigment reinforced with glass fiber have been chosen as materials that meet design requirements; description of building procedure by means of hand lay- up technique, preceded by gel- coating. In German.

ID NO.- EI70X155669 055669

Housing demand speels opportunity for plastics

Plastics World v 27 n 12 Dec 1969 p 24-7

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (BUILDINGS, Prefabricated),

CARD ALERT: 402, 415, 817

Considerations of technical and economic factors related to housing market which in terms of economic possibilities is biggest potential in existence. Plastic are most suitable construction material that can play key role in revitalization of building industry. Present use of plastics in construction building is comparatively low- share for 4. 8 billion lb or plastics consumed will be approximately 1. 5 billion dollars or only 4% of total value of materials going into construction. Strongest building applications for plastics with vinyl as dominant. Operation Breakthrough Program sponsored by Department of housing and Urban Development, and role of plastics materials in its realization. Examples of new building applications for plastics.

ID NO.- EI70X155668 055668

Modular bathroom made of plastics- 1, (Sanitaerzellen aus Kunststoff)

KNAPPKE G

Kunststoffe-Plastics v 16 n 9 1969 p 337-9 CODEN: KUNSA

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (BUILDING MATERIALS, Plastics), (PLASTICS, Acrylic), (PLASTICS, Reinforced),

CARD ALERT: 402, 415, 817

Considerations of introduction of molded module, including bathtub, toilet, washbowl and other useful bathroom fixtures, that are placed into position in building as ready to use after pipes and power cables are connected; testing of various types of modular bathrooms invented in different countries with special attention paid to units made of acrylic glass and glass fiber reinforced polyester; mass production of modular bathroom and low cost as promising advantages of new approach to resolving of construction problems. In German.

ID NO.- EI70X154329 054329

New technology for low and moderate cost housing

STAHL JS

Stahl Indus, Inc, Youngstown, Ohio

ASME, 2nd Interamerican Conf Mater Technol, Mexico City, Mexico, Aug  
24-27 1970 pt 1 p 156-9

DESCRIPTORS: (\*HOUSES, \*Prefabricated), PLASTICS, BUILDING MATERIALS

CARD ALERT: 402, 817



Foam technology strives to keep pace with proliferating applications

Progr Plast v 11 n 12 Dec 1969 p 15-18, 28 CODEN: PRPAB

DESCRIPTORS: (\*PLASTICS, \*Cellular), (BUILDING MATERIALS, Plastics), (FURNITURE MANUFACTURE, Plastics), (PACKAGING MATERIALS, Plastics),

CARD ALERT: 415, 694, 811, 817

Survey of some recent development in uses of rigid, semirigid and flexible cellular plastics with special attention paid to furniture, automotive and construction industries. In 1969, refrigerators and automobiles used average of 5 and 16 lb/unit respectively. New growth in construction field is largely due to development of many new fire resistant component. Concrete- molding applications for expanded styrene with very great potential. Listing of many construction uses at present and in the future. Recent developments in foam applications in furniture and packaging are described in some details. Forecasting for future with inroading of new cellular plastics materials.

ID NO.- EI70X154146 054146

Plastics parade at Expo '70

Mod Plast v 47 n 4 Apr 1970 p 91-3 CODEN: MOPLA

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (EXHIBITION BUILDINGS, Japan), (PLASTICS, Reinforced), (PLASTICS, Vinyl), (PLASTICS, Acrylic),

CARD ALERT: 402, 415, 817

Report on plastics applications by architectural designers in exhibition buildings. The Japanese World's Fair has become a vast showcase for the capabilities of polymers in the building construction field. Virtually every plastic material can be found in some part of the pavilions- altogether close to 1 million lb of it are used at the fair. The favored material is glass- reinforced polyester, particularly in the domes that seem to dominate the fairscope. Vinyls show up in many forms, most important of which has been the glass- reinforced PVC employed in the roof of United States pavilion. Several PVC and acrylic applications are briefly described and illustrated.

ID NO.- EI70X153787 053787

Plastics house steals show

Progr Plast v 11 n 11 Nov 1969 p 21-2, 39 CODEN: PRPAB

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (PLASTICS INDUSTRY, Exposition),

CARD ALERT: 415, 817

Description of one- family house made entirely of plastics materials that has been shown at Plastics Exposition in Toronto in 1969. This three- bedroom home was erected with guiding principle that all plastics products used- building components, furniture, furnishings, capets, etc- must be commercially available and in use in more conventionally constructed houses. Living- dining room, kitchen, bedroom, as well as vinyl fascia and soffit viewed from rear patio, entering front door, and bathroom are illustrated by photos. Plastics house was most fascinating highlight at show. It received enthusiastic reception by public and by peopoe involved in plastics industry.

ID NO.- EI70X153786 053786

Plastics. Modern materials of construction

SEYMOUR RB

Univ of Houston, Tex

Plast Aust v 20 n 9 Sept 1969 p 73-4, 76 CODEN: PLAUA

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (PLASTICS, Structural

),

CARD ALERT: 415, 817

Considerations of all aspects related to present and future uses of plastics materials in construction building, engineering and similar applications; exceptional performances of plastics in space vehicles parts such as in polyurethane- backed front porch, EMV spacesuits, phenolic honeycomb, polyurethane laminated fuel tanks, and hundreds of other applications have been demonstrated that modern man is no longer dependent on conventional materials and design criteria of critical structures; brief survey of structural plastics used in sandwich constructions, self- supporting structures, pipe lines, roofing, etc.

ID NO.- EI70X152148 052148

Light fascia panels in apartment houses and commercial buildings,  
(Leichtfassaden bei mehrgeschossigen Wohnungs- und Zweckbauten)

SCHWABE A

Kunststoffe-Plastics v 16 n 11 1969 p 436, 438-40

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (BUILDINGS, Facings),

CARD ALERT: 415, 817

Report on study performed in West Germany on development and applications of fascia panels made with use of plastics materials; investigation included inspection and analysis of buildings, made with use of prefabricated light fascia panels in Western countries; greatest progress has been shown to be made in France when experiences gained with various types of plastics sandwich panels were satisfactory; examples of several facades made of light fascia panels are illustrated by photos. In German.

ID NO.- EI70X152147 052147

Plastics house at Toronto Fair

Modern Plastics v 46 n 12 Dec 1969 p 112

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (PLASTICS, Cellular), (PLASTICS, Polystyrene),

CARD ALERT: 415, 817

Description of one- family home based strictly on commercially available plastics components erected by SPI Canada and the Ontario government, that has been shown at the 4th Plastics Show of Canada. It looked like a conventional, three- bedroom ranch- type home, but it turned out to be an all- plastics house. Exterior wall construction is based on system of steam- expanded polystyrene blocks designed with tongue- and- groove joints for firm interlocking. Blocks serve as forms into which concrete is poured, which provides structural support for house. Foamed forms remain in place and provide built- in insulation. Special stucco based on acrylic adhesive provided exterior finish. PVC siding, fascia, and soffits were used on several outside areas of plastics house. Description of interior of house where twenty- five resins were used and eleven manufacturing processes.

ID NO.- EI70X152146 052146

New plastics structures cut on- site construction costs

Plastics Technology v 15 n 9 Sept 1969 p 27

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (PLASTICS, Polyurethane), (PLASTICS, Cellular), (PLASTICS, Reinforced),  
CARD ALERT: 415, 817

Description of three new industrial applications of plastics in form of prefabricated units which can be used to solve one of construction industry's main problems- high on- site labor costs. Development of technique and related equipment for manufacture of all foam load-bearing panel (not sandwich structure) using 6 to 9 lb density polyurethane foam reinforced with glass fibers. These foam panels can be used to build small houses. Development of structural polyurethane foam- wood panels which can be used as modules in structural roof and wall systems. Third development includes factory insulated fiber glass storage tanks in which polyurethane foam is in- shop encapsulated inside both hand lay- up and filament wound glass fiber reinforced plastic tanks.

ID NO.- EI70X152145 052145

What's happening in vinyl siding

KESTLER J

Modern Plastics v 46 n 12 Dec 1969 p 86-7

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (PLASTICS, Vinyl), (BUILDINGS, Facings),

CARD ALERT: 415, 817

Economic and technical considerations of use of PVC siding in building applications. Estimation of PVC siding market for 1969 is about 50 million lb, with consumption as high as 70 million lb in 1970. Big boom in sales spurs fierce competition and consideration of some new production techniques. Success in siding has expanded market for PVC building products to include such items as soffits and fascia panels, rain- water systems, etc. All PVC siding is now produced via profile extrusion, but thermoforming and cold forming of extruded sheet are under consideration with possible use of in- line process. Types of molding materials used.



ID NO.- EI70X149346

049346

Potential for thermoset- concrete casting machines,  
(Einsatzmoeglichkeiten fuer Duroplastbeton- Giessmaschinen)

WILL M

Kunststofftechnik v 8 n 11 Nov 1969 p 407-11

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (PLASTICS, Fillers),  
CONCRETE MIXERS,

CARD ALERT: 412, 415

Consideration of new construction materials consisting of polymer binders mixed with such fillers as quartz, kaolin, calcium carbonate, granite, etc, and other additives. Development of machinery designed for preparation of resin- concrete cast mixtures and its operation techniques. Selection of mixture components and their pretreatment. Recommendations for mixing parameters. Scheme of thermoset- concrete manufacturing plants. Economic consideration with special attention paid to production cost, illustrated by examples from practice. In German.

ID NO. - EI70X147545 047545

Applications of polyethylene foil in architecture and civil engineering, (Toepassingen van polyetyleenfolie in de bouwkunst en de civiele techniek)

HEIREMANS R

UCB - Afedling Sidac, Gent, Belgium

Ingenieursblad v 38 n 18 Sept 16 1969 p 510-13

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (PLASTICS, Polyethylene), (ROAD MATERIALS, Plastics), RESERVOIRS,

CARD ALERT: 402, 406, 441, 817

A comparative survey of the types of plastic materials used in the various sectors of architecture and civil engineering is presented. The commercially available kinds of polyethylene and their properties are discussed, and the applications of polyethylene foil in architecture as well as in road engineering, water reservoirs, etc, are indicated. In Flemish.

ID NO.- EI70X146550 046550

Manufacture of glass fiber reinforced plastics (GFRP) components,  
(Herstellen glas faserverstaerkter Kunststoffteile)

GRUENEWALD R

Kunststoffe v 59 n 10 Oct 1969 p 615-20

DESCRIPTORS: (\*PLASTICS, \*Reinforced), (BUILDING MATERIALS, Plastics

),

IDENTIFIERS: PLASTICS, GFRP

CARD ALERT: 816

Brief survey of all aspects related to raw materials, auxiliary chemicals used as well as to processing techniques, equipment employed and field of applications. Description of manufacturing techniques includes- hand lay- up method, spray- up, injection technique, vacuum bag- molding, cold pressure molding, match- molding at elevated temperature, prepregs and premix molding, filament winding and centrifugal casting. Continuous methods with special regard to continuous manufacture of GFRP profiles. Listing of several building components for load- bearing applications. 8 refs. In German.

ID NO.- EI70X145722 045722

PVC and its copolymers in architecture and civil engineering, (Le PVC et ses copolymers dans la construction et le genie civil)

COCQUYT F

Solvic S.A., Brussels, Belgium

Ingenieursblad v 38 n 18 Sept 16 1969 p 481-7

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (PLASTICS, Vinyl),

CARD ALERT: 402, 817

Various advantages offered by plastic materials with regard to weight are noted and thermal insulation, acoustical and electric problems, scaling, corrosion resistance, etc, considered. The most interesting possibilities provided by PVC and its copolymers in architecture and civil engineering are discussed. In French.

ID NO.- EI70X145684 045684

Elastomers in architecture, (Les elastomeres dans le batiment)

OTT EK

Du Pont de Nemours Int S.A., Geneva, Switzerland

Ingenieursblad v 38 n 18 Sept 16 1969 p 488-95

DESCRIPTORS: (\*BUILDING MATERIALS, \*Rubber), BUILDINGS, (RUBBER, Synthetic), (ROOFS, Plastics),

CARD ALERT: 402, 818

The application of neoprene and 'Hypalon' synthetic elastomers in modern building systems is dealt with. The physical and chemical properties of the elastomers are described, and their applications as sealing and expansion joints, and roofings in prefabricated elastic foil reported. In French.

ID NO.- EI70X145667 045667

Use of epoxy resins in the building industry, (Toepassing van epoxyharsen in de bouwindustrie)

TUINSMA JC

Shell Nederland Chemie N.V., 's-Gravenhage, Netherlands

Ingenieursblad v 38 n 18 Sept 16 1969 p 496-501

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), BUILDINGS, RESINS,

CARD ALERT: 402, 815

The applications may be divided into four principal groups, namely, solvent-free systems, floor coverings, sub-base coatings and concrete glues. The advantages offered by epoxy resin systems are noted. In Flemish.

ID NO.- EI70X143472 043472

Solid plastics achievement

Brit Plast v 42 n 12 Dec 1969 p 101-2

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (EXHIBITIONS, United Kingdom),

CARD ALERT: 415, 706, 817

Some remarks related to Building Exhibition in London in regard to plastics penetration into the building industry. Rainwater and soil systems in rigid PVC which are now available in such a diverse range of shapes that the requirements of the most revolutionary architect could scarcely fail to find satisfaction. A new trend at the show was the number of underground drainage components that are now being launched. Examples of plastics applications in plumbing services are given such as acetal taps for basins and baths, polyester/glass inspection chamber, rigid PVC purpose built adoptors which fit into soil and rainwater systems, etc. Other building applications of plastics include polyester/glass roofing sheet, large bore pressure gas pipes, and ABS inspection chamber.

ID NO.- EI70X040026 040026

Plastics in building construction, (Kunststoffe im Bauwesen)

SCHWABE A

Kunststoffe v 59 n 10 KOct 1969 p 723-5

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (PLASTICS INDUSTRY, West Germany),

CARD ALERT: 415, 817

Economic considerations related to use of plastics materials in building applications in West Germany. Consumption of plastic building materials and its growth in period of from 1957 to 1968. Use of plastics in specific building applications divided into- flooring, pipe, profiles, foamed thermal insulation, etc. Special problems connected with employing plastics in building construction. Forecase for future development. In German.



ID NO.- EI70X038567 038567

Syntactic foams for deep sea engineering applications

RESNICK I; MACANDER A

American National Standards Inst, New York, NY

ASCE J Constr Div v 96 n C01 June 1970 paper 7376 p 45-60

DESCRIPTORS: (\*STRUCTURAL DESIGN, \*Light Weight), OCEANOGRAPHY,  
UNDERSEA TECHNOLOGY, (PLASTICS, Cellular), (BUILDING MATERIALS,  
Plastics),

CARD ALERT: 408, 471, 472, 817

Syntactic foam has a variety of buoyancy for structural applications in the deep ocean where light weight, high strength and resistance to water absorption are important criteria. The physical properties of a family of syntactic foam materials, as well as variables which permit foam properties to be adjusted to meet specific requirements are analyzed. The behavior of syntactic foam under hydrostatic exposure and its stability after exposure are reported. Nondestructive test procedures for quality control and estimated material costs. 7 refs.

ID NO.- EI70X038543 038543

Fire testing and acceptance of plastics in building codes

AKIN R

E.I. duPont de Nemours & Co, Inc, Wilmington, Del

SPE, Reg Tech Conf, Tech Pap for meeting (Chicago Sec) Oct 2-3 1969

p 50-60

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics),

CARD ALERT: 402, 415, 817

Discussion of all factors related to effect of existing building codes on use of plastics materials in building applications. Five tests used in building codes and their relation to ASTM standards, as well as their applications to plastics. Plastics are now specifically described and accepted in major building codes. A few codes, notably San Francisco and the new New York City building code, impose more severe restrictions against plastics interior finish than against wood and many layers of paint. Smoke is a significant hazard, but it seems that no single test will provide closeguide to output of smoke. Recommendations for plastics engineers and architects in reference for the use of plastics in building in accordance with codes requirements.

ID NO.- EI70X038541 038541

Plastics in mobile homes

WRIGHT V

SPE, Reg Tech Conf, Tech Pap for meeting (Chicago Sec) Oct 2-3 1969  
p 24-31

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics),

CARD ALERT: 402, 415, 817

Quick look at plastics usage in mobile homes and recreational vehicles. It has been shown that these materials are winning a secure place in this specialized area of the building field. State-of-the-art of mobile home industry with explanation of its growth and presentation of future prospects. Typical uses of plastics in mobile homes and travel trailers are tabulated with presentation of type of application and plastics most widely specified for each application. Economic evaluations of the uses of plastics in mobile homes as an opening up new prospects for stepped up usage in conventional building construction.

ID NO. - EI70X036916 036916

Research study on soil treatment materials for dust palliation, soil waterproofing and soil strengthening

IMPOLA CAN; OLSEN DA

U S Waterways Experiment Station, Vicksburg, Miss- Contract Report S-68-5 Nov 1968 (recd 10/2/69), 55 p

DESCRIPTORS: (\*SOILS, \*Testing), (SOILS, Trafficability), (PLASTICS, Polyurethane), (ROAD MATERIALS, Plastics), (BUILDING MATERIALS, Sealants),

CARD ALERT: 483

Study to evaluate various commercially-available resin systems, both organic and inorganic, to determine if they could be utilized as dust palliatives, soil waterproofing agents, and soil stabilizers. The results showed that laboratory-synthesized urethane elastomers with over 2000% elongation and over 1000 psi tensile strength, when applied on loose sand, these elastomers gave a tough, flexible surface coating.

ID NO.- EI70X036526 036526

Design plus durability. Keys to the use of plastics in panels for construction

HILDEBRAND R

Panels Plus, Inc, Kansas City, Mo

SPE, Reg Tech Conf, Tech Pap for meeting (Chicago Sec) Oct 2-3 1969  
p 1-4

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (PLASTICS, Reinforced), (PLASTICS, Structural),

CARD ALERT: 415, 817

Discussion of some aspects of increasing applications of plastics materials in prefabrication of structural members with special attention paid to the ability of plastics to combine design with durability in outdoor applications. Case history is presented which illustrates how a new spandrel panel has been developed with ABS film laminated with polyvinyl fluoride film to prevent color stability and better weather resistance. Design and manufacture of epoxy-based tools for vacuum forming, lamination and production of foam cored sandwich panels. Aggregate surfaced panels. Present problems are outlined and forecast for the future development is presented with requirement for fire resistant materials.

ID NO.- EI70X036181 036181

Vinyl siding and accessories

WEAVER LW

Bird & Son, Inc, East Walpole, Mass

SPE, Reg Tech Conf, Tech Pap for MMEETING (chicago Sec) Oct 2-3 1969

p 6-13

DESCRIPTORS: (\*PLASTICS, \*Vinyl), (BUILDING MATERIALS, Plastics), (PLASTICS, Extrusion),

CARD ALERT: 415, 816

Considerations of technical, economical and organizational aspects of rigid PVC siding with special attention paid to past, present and future pitfalls incorporated in this new branch of plastics industry. At present, the raw material supplier is the compounder who delivers the prepared compound to the fabricator of the siding. The machinery manufacturers supply machinery specifically developed for extrusion of PVC siding and incorporated in the automated production lines. The roles of processors and distributors as well as of dealer-applicators. Protection of consumer interests is extensively discussed and the future of rigid PVC as a building material outlined.

ID NO.- EI70X033959 033959

Investigation of plastic strength and stress relation of various disperse structures with aid of semiautomatic plastometer

ESIPOVA LN; MIKHAILOV NV

Inst of Physical Chemistry, Academy of Sciences, Moscow

Colloid J of USSR (English translation of Kolloidnyi Zhurnal) v 31 n

2 Mar-Apr 1969 p 156-9

DESCRIPTORS: \*STRENGTH OF MATERIALS, MATERIALS TESTING APPARATUS, COLLOID CHEMISTRY, (BUILDING MATERIALS, Testing), (PLASTICS, Reinforced),

CARD ALERT: 421, 422

Modifications of the cone plastometer permit more complete and reliable investigation of the rheological, strength, and relaxation properties of spatial structures (ceramic and cement pastes, building mortars, polymers containing active fillers). New data on the nature and degree of structure formation in a system can be obtained with the aid of loading curves and stress relaxation data. Structure formation can be represented by a curve with relaxation processes disregarded, if it is taken into account that the formation time is thereby shortened by 30 min. An indenter plate is recommended as the working unit for obtaining the most consistent readings regardless of the liquid- solid ratio, with the semiautomatic plastometer designed in the Laboratory of Physicochemical Mechanics, Institute of Physical Chemistry, Academy of Sciences of the USSR.

ID NO.- EI70X032725 032725

On the growing use of automation and true production principles in the quantity manufacture of structures and products from composites

HARDESTY EE

SPE, Reg Tech Conf, Tech Pap for meeting (Cleveland Sec) Sept 25-26 1969 p 86

DESCRIPTORS: (\*PLASTICS, \*Reinforced), (BUILDING MATERIALS, Plastics), AUTOMATION,

CARD ALERT: 415, 816, 817, 913

Considerations related to use of reinforced plastics as efficient engineering materials, especially in building construction. In recent years, burgeoning acceptance and utilization of composites, creating sizable quantity orders, is forcing some segments of the industry to accept the futility of continuing to expand their skilled-labor/minimum- equipment philosophy in return for production systems, often with full automation.



ID NO.- EI70X032411 032411

Plastics in concrete technology

WITCHLOW A; VAN HOORN TC; DAVIES PE; ROWLAND J

Concrete v 4 n 1 Jan 1970 p 12-21

DESCRIPTORS: (\*CONCRETE CONSTRUCTION, \*Plastic Applications), (BUILDING MATERIALS, Plastics),

CARD ALERT: 405, 412, 817

Introductory review and three related short articles contribute to organic polymers in cement compositions, epoxy resins and their uses in concrete, and acrylic and unsaturated polyester resins as adhesives. 11 refs.

ID NO.- EI70X032404 032404

Accelerated weathering tests run on different polyester-based facing materials, (Abgekuerzte Bewitterungsversuche mit unterschiedlichen Polyester - Beschichtungsmaterialien )

HEITZ E

Plastverarbeiter v 20 n 9 Sept 1969 p 627-34

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (PLASTICS, Reinforced ), (BUILDING MATERIALS, Testing), PLASTICS. Weathering,

CARD ALERT: 415, 817

Evaluation of the result of the investigations with the surface tester Perth- o- meter. The curves plotted in the figures give an average of 20 test scannings each on the individual test specimens. It has been shown that it is readily possible to provide facade elements with glass- reinforced polyester facings if correct formation and protection of the laminate surface is ensured. Fascia panels, made of polyester reinforced with nonwoven synthetic fibers, offer high surface resistance with reduced tendency to crack. 15 refs. In German.

ID NO.- EI70X032273

032273

PVC's impact on building. The B.F. Goodrich view

SIGNORINI PP

Plastics World v 27 n 10 Oct 1969 p 22-33

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (PLASTICS, Vinyl),

CARD ALERT: 415

Considerations related to use of PVC in building products. For this plastic material, there exists now billion pound market, but potential market is many times larger. This article, which is based on opinion of number one product of PVC, discusses marketing approaches needed to crack this giant market. Examples of structural members made of PVC with special regard to flooring and window frames made from prefabricated profiles. Applications of vinyl coatings and paints. Industrialized building offers promise to plastics with prefabrication of building components by conventional processing techniques.

ID NO.- EI70X029847 029847

Building industrialization and plastic materials at the 5th show in Bologna, (Industrializzazione edilizia e materie plastiche al //5//5//0 salone di Bologna)

BONFIGLIO G

Materie Plastiche ed Elastomeri v 35 n 11 Nov 1969 p 1485-93

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (PLASTIC MATERIALS, Exhibitions),

CARD ALERT: 402, 817

Expanded use of cellular materials (polystyrene and polyurethane) is pointed out. Details of plastic roofing materials shown at this 1969 exhibition. Statistical data on 1968 Italian consumption of various plastic materials in the building industry and its percentage of the total plastics consumption in the country. In Italian.

ID NO. - EI70X029595 029595

Idea exchange. Steel skins plus urethane foam core plus PVF film surfacing equals instant building

Modern Plastics v 46 n 11 Nov 1969 p 46

DESCRIPTORS: (\*BUILDINGS, \*Prefabricated), (BUILDING MATERIALS, Plastics),

CARD ALERT: 402, 817

Applications of new prefabricated wall element to erect large appliance assembly building in German electrical industry factory. This construction was performed in a few months instead of a year or more normally required. Involved is sandwich panel that consists of 3- lb density rigid polyurethane foam core between skins of 1.5 mm galvanized steel sheet. Material is supplied in standard 1- m width, and in length up to 10 m. Steel sheet is surfaces with corrosion resistant 1- mil polyvinyl fluoride film. New structure is 279 ft long, 102 ft wide, and 43 ft high.

ID NO.- EI70X026466 026466

Compacting soils with resins, (Talajszilarditas muanyaggal)

REGELE Z

Muanyag es Gumi v 6 n 7 July 1969 p 276-80

DESCRIPTORS: (\*SOILS, \*Compaction), (BUILDING MATERIALS, Plastics),  
FOUNDATIONS, GROUTING,

CARD ALERT: 405, 415, 483, 817

Soil grouting techniques using chemical processes play an important role in foundations and in civil engineering. The theoretical and practical development of processes for introducing resinous bonding materials into construction practice is discussed. In Hungarian.

ID NO.- EI70XC21428 021428

Problem of safety against fracture of glass fiber reinforced plastics (GFRP), (Zur Problematik der Sicherheit gegen Bruch bei Glasfaser- Kunststoffen)

NEITZEL M; MUELLER D

Kunststoffe v 59 n 12 Dec 1969 p 927-33

DESCRIPTORS: (\*PLASTICS, \*Reinforced), (PLASTICS, Mechanical Properties), (BUILDING MATERIALS, Plastics), (CONTAINERS, Plastics),

IDENTIFIERS: PLASTICS, GFRP

CARD ALERT: 415, 694, 817

Uncertainties of dimensioning are caused by errors in the assumed load, when the stresses are calculated and in the strength figures. This is why the relationships between safety and degree of variation are first indicated. An important concept is the coefficient of variation as a ratio between standard deviation and mean value. From about 8000 individual results the coefficients of variation of GRP laminates (fabric, mat, roving) for various types of stress were determined and compared with those of other conventional construction materials. Examples are given of the use of coefficient of variation in designing of containers and practical recommendations are suggested for manufacture and quality control. 29 refs. In German.

ID NO.- EI70X021041 021041

Comparison of different methods for determination of interlaminar shear strength (Vergleich verschiedener Verfahren zum Bestimmen der interlaminaren Scherfestigkeit)

MENGES G; KLEINHOLZ R

Kunststoffe v 59 n 12 Dec 1969 p 959-66

DESCRIPTORS: (\*PLASTICS, \*Reinforced), (PLASTICS, Mechanical Properties), (BUILDING MATERIALS, Plastics),

IDENTIFIERS: PLASTICS, GFRP

CARD ALERT: 415, 817

This paper contains a bibliography- based survey of the various methods that are used for determining interlaminar shear strength. The aim was to find out which influencing factors are effective. Indications are also given of the value of the various methods from the information point of view, when the resins and reinforcing materials are varied. Data obtained from experiments are critically evaluated and compared with test results obtained by photomicrography of broken structural components. Discussion of materials presented in terms of practical recommendations. 14 refs. In German.



ID NO. - EI70X021040 021040

Contribution towards explanation of transverse tensile failure of filament wound laminates, (Beitrag zur Deutung des Querkzugversagens von Stranglaminaten)

ROTH S; GRUENINGER G

Kunststoffe v 59 n 12 Dec 1969 p 967-74

DESCRIPTORS: (\*PLASTICS, \*Reinforced), (PLASTICS, Filaments), (PLASTICS, Mechanical Properties), (BUILDING MATERIALS, Plastics),

IDENTIFIERS: PLASTICS, GFRP

CARD ALERT: 415, 817

As the result of tests on macromodels, possible failure limits for unidirectional composite materials are drawn up which describe tensile failure at right angles to the fiber direction. Loading tests on laminates produced with variation of various parameters have confirmed the limiting curves with their tendency. The fact that the determined values fall short of the theoretically attainable values enables the conclusion to be drawn that the two low bond strength is critical for failure. The choice of suitable primers and embedding materials, as well as more sophisticated impregnating techniques, i. e., better wetting, fiber distribution and low air contents, are of decisive importance. 15 refs. In German.

Effect of vibrational stresses on the residual short-term strength of glass fiber reinforced plastics (GFRP) laminates, (Einfluss von Schwingbelastungen auf die Rest-Kurzzeitfestigkeit von GFK-Laminaten)

KNAPPE W; WURTINGER H

Kunststoffe v 59 n 12 Dec 1969 p 975-81

DESCRIPTORS: (\*PLASTICS, \*Reinforced), (PLASTICS, Testing), (PLASTICS, Mechanical Properties), (BUILDING MATERIALS, Plastics),

IDENTIFIERS: PLASTICS, GFRP

CARD ALERT: 415, 817

Description of test program and presentation of its results in tables and curves. It has been shown that test specimens in longitudinal test showed no regular connection, when subjected to tensile fatigue stresses, between the static crack formation stress and the residual strength. The longitudinal test specimens can in some cases be subjected to dynamic loads far above the static crack formation stress without loss of strength. In the case of diagonal test specimens however, tensile fatigue loading with higher loading cycles ( $N$  greater than  $10^4$ ) above the static crack formation stress is not possible. No crack formation was observed when a longitudinal test specimen was subjected to compressive fatigue stress. In this case damage is caused by delamination. 17 refs. In German.

Determination of the damage limit and the effect of resin crack formation on stress behavior of glass fiber reinforced plastics (GFRP), (Zur Ermittlung der Schaedigungsgrenze und Einfluss der Harzrissbildung auf das Beanspruchungsverhalten von Glasfaser-Kunststoffen)

SCHADEL O

Kunststoffe v 59 n 12 Dec 1969 p 892-8

DESCRIPTORS: (\*PLASTICS, \*Reinforced), (PLASTICS, Mechanical Properties), (PLASTICS, Structural), (BUILDING MATERIALS, Plastics),

IDENTIFIERS: PLASTICS, GFRP

CARD ALERT: 415, 817

Discussion of opinion prevailed in technical circles that the operational stress of GFRP building components should not exceed a limiting stress decisive for resin crack formation. Little is known about the level of the damage limit since methods used so far do not allow the primary damage limit to be determined accurately or are not suitable for general application. A method that is suitable also for practical use is based on determination with piezoelectric recorders. This technique is described and critically evaluated. Using some examples, it is shown that piezoelectric measurements allow additional information about the mechanical characteristics of damaged GFRP laminates to be obtained. 6 refs. In German.

ID NO.- EI70X020952 020952

Safety of glass fiber reinforced plastics (GFRP) constructions,  
(Sicherheit von Konstruktionen aus Glasfaser- Kunststoffen)

SKUPIN L

Kunststoffe v 59 n 12 Dec 1969 p 917-21

DESCRIPTORS: (\*PLASTICS, \*Reinforced), (PLASTICS, Mechanical  
Properties), (PLASTICS, Testing), (PLASTICS, Structural), (BUILDING  
MATERIALS, Plastics),

IDENTIFIERS: PLASTICS, GFRP

CARD ALERT: 415, 817

Description of calculating method for determination of dimensions of  
standard members made of GFRP. Results obtained with GFRP  
constructions are compared with those obtained with concrete and  
steel. It has been stated that the difference compared with designing  
of constructions of concrete and steel lies in the fact that the  
limiting states are regarded as functions of time and that a limiting  
state for the degradation of the material is introduced. 6 refs. In  
German.

ID NO.- EI70X020951 020951

Critical remarks on the calculation of wing assemblies made of reinforced plastics, (Kritische Bemerkungen zur Berechnung von Tragwerken aus verstaerkten Kunststoffen)

DIETERICH D

Kunststoffe v 59 n 12 Dec 1969 p 922-7

DESCRIPTORS: (\*PLASTICS, \*Reinforced), (PLASTICS, Mechanical Properties), (PLASTICS, Structural), (BUILDING MATERIALS, Plastics),

IDENTIFIERS: PLASTICS, GFRP

CARD ALERT: #15, 817

Examination of applicability of mathematical methods based on Hooke's law for calculating load-bearing structures. The aim is to achieve constructions in which the stresses act in the center plane of the laminate. The bearing capacity is then limited by the stability characteristics. Bending rods made of reinforced plastics can only be subjected to a fraction of the bearing load determined elastically-theoretically. In the case of sheets the bearing capacity is less reduced by predeformation than in the case of rods. Shells have been shown to be advantageous structures for reinforced plastics. In German.

ID NO.- EI70X020949 020949

Load- bearing behavior of structural components made of reinforced plastics, (Tragverhalten von Baugleibern aus verstaerkten Kunststoffen)

MOSER K

Kunststoffe v 59 n 12 Dec 1969 p 955-8

DESCRIPTORS: (\*PLASTICS, \*Reinforced), (PLASTICS, Mechanical Properties), (BUILDING MATERIALS, Plastics),

IDENTIFIERS: PLASTICS, GFRP

CARD ALERT: 415, 817

Brief analysis of most important factors affecting behavior of structural members exposed to external stressing followed by critical evaluation of the principles of designing applied for structure made of reinforced plastics. Practical recommendations are suggested and discussed in relation to disturbed as well as undisturbed elementary forms. Rigid material reinforced plastic structure are also included and discussed. 12 refs. In German.

ID NO.- EI70X020948 020948

Behavior of three- directional filament wound pipes exposed to multi-axial loading, (Mehrachsig beanspruchte Drei- Richtungs- Wickelrohre aus verstaerkten Kunststoffen)

SCHELLING H; KRAUSS H

Kunststoffe v 59 n 12 Dec 1969 p 911-17

DESCRIPTORS: (\*PLASTICS, \*Reinforced), (PLASTICS, Mechanical Properties), (PLASTICS, Testing), (PLASTICS, Structural), (BUILDING MATERIALS, Plastics),

IDENTIFIERS: PLASTICS, GFRP

CARD ALERT: 415, 817

Samples of pipes made of a tangential supporting layer and two symmetrical diagonal layers were subjected to various stresses accordingly to test program. Measuring results were compared with the calculated stresses resulting from the continuum and triangle theory and which fulfilled an associated fracture hypothesis or a specific fracture criterion. With the fracture hypothesis usual up till now, taking into consideration the strengths parallel and vertical to the fiber direction, as well as the shear strength, results in agreement with the tests could be obtained only if the fibers in the three layers are in the same direction. If the angles of intersection between the diagonal and the tangential layers are greater than 50//0, the indicated, modified fracture hypothesis under consideration of the strength parallel to the fiber direction and the shear strength give better results. 7 refs. In German.

ID NO.- EI70X020946 020946

Strength of glass cloth reinforced polyester laminates under multi-axial loading, (Festigkeit von Glasgewebe- Polyester- harzlaminate bei mehrachsiger Beanspruchung)

KABELKA J; VRANICKY J; ZAMPACH J

Kunststoffe v 59 n 12 Dec 1969 p 899-904

DESCRIPTORS: (\*PLASTICS, \*Reinforced), (PLASTICS, Mechanical Properties), (PLASTICS, Testing), (PLASTICS, Structural), (BUILDING MATERIALS, Plastics),

IDENTIFIERS: PLASTICS, GFRP

CARD ALERT: 415, 817

The paper gives the results of strength determinations on glass fabric reinforced polyester resin laminates under conditions of short-term, multi-axial stress. The Goldenblat- Kopnov hypothesis is used as a strength function. This can even be used for long-term static stresses. Furthermore, the time dependence of the main strength values are determined. Test equipment developed specifically for experimental program is described. Measuring results were tabulated and plotted in curves. 12 refs. In German.



ID NO. - EI70X019090 019090

Building component approach to effective utilization of plastics

STAHL JA

B. F. Goodrich Chemical Co, Cleveland, Ohio

SPE- 27th Annual Tech Conference, Chicago, Ill, v 15 May 5-8 1969 p  
334-6

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics),

CARD ALERT: 415

Plastics industry must continually strive to convert its technological data and knowhow into products that are competitive in complex building construction industry; newer, sophisticated molding techniques and high quality, low cost plastic materials must be used to their own maximum advantage and in conjunction with one another; this will permit production of functional and economical building components that can compete in market place and serve as one answer to lower construction costs.

ID NO.- EI70X018421 018421

Effect of strain rate on mechanical characteristics of Viniplast

GLUKHOV LV

Chem & Petroleum Eng (English translation of Khimicheskoe i Neftyanoe Mashinostroenie) n 7-8 July-Aug 1968 p 618-22

DESCRIPTORS: (\*PLASTICS, \*Vinyl), STRENGTH OF MATERIALS, (BUILDING MATERIALS, Plastics), (PLASTICS, Polyethylene),

CARD ALERT: 023, 118, 157

Stress-strain relationships for Viniplast and polyethylene are obtained from experimental data taken at a constant deformation rate. Results of the experimental-statistical investigation suggest that any parts and structures made from Viniplast should be calculated for the viscoelastic strength of the material, or if plastic strain is not permitted the corresponding strain, taking into account the speed factor. If a slight plastic deformation is permissible, the yield strength or the corresponding strain should be used with the speed factor taken into account.

ID NO.- EI70X018189

018189

Manufacture of insulating materials at site of placement,  
(Herstellung von Daemmstoffen am Einbauort)

SARRAZIN C

VEB Landbaukombinat Potsdam, East Germany

Bauzeitung v 23 n 9 Sept 1969 p 466-7

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), HEAT INSULATING MATERIALS,

CARD ALERT: 023, 099, 157

Features of light, portable apparatus, designed for production of plastic foam, particularly urea- formaldehyde, on construction site. The foaming gun for application of the resin- foam mixture at horizontal and vertical points of the insertion is described. Capacity of the device is approximately 10 cu m/hr. In German.

ID NO.- EI70X016863 016863

Investigations of plastic films for canal linings

HICKEY ME

U S Bur Reclamation-Water Resources Tech Publ-Research Report 19, 1969, 35 p, (Available at U S Govt Printing Office, Washington, DC)

DESCRIPTORS: (\*CANALS, \*Linings), (BUILDING MATERIALS, Plastics), (BUILDINGS, Waterproofing), (POLYMERS, Polyvinyl Chloride),

CARD ALERT: 415, 821

Testing program was designed to provide information on impermeability, toughness, resistance to biological and chemical deterioration, and service life of plastic lining under different environmental conditions. Accelerated laboratory testing and field performance evaluations of polyvinyl- chloride and polyethylene plastic films indicate that materials can be used satisfactorily as buried membrane linings. Neither material is suitable as exposed lining and must be protected by a minimum of 1 ft of earth cover.

ID NO.- EI70X016480 016480

New applications for expanded polystyrene in building industry

WIRTH H; RADY-PENTEK A

BASF Corp, South Kearny, NJ

SPE-27th Annual Tech Conference, Chicago, Ill, v 15 May 5-8 1969 p  
350-2

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (PLASTICS,  
Polystyrene),

CARD ALERT: 023, 157

Consumption of expanded polystyrene in building industry is growing rapidly; starting with simple insulation boards, this material is used more and more as integral part of construction systems; some systems, introduced to market during last years, which seem to be very promising are discussed; BACKBONE SYSTEM, Concrete Core Wall system, DRYVIT system, light weight brick and light weight concrete. 10 refs.

ID NO.- EI70X016478 016478

Development of impact test for evaluation of toughness of rigid plastic building components

TANZILLI JD

B.F.Goodrich Chemical Co, Avon Lake, Ohio

SPE-27th Annual Tech Conference, Chicago, Ill, v 15 May 5-8 1969 p 346-9

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics),

CARD ALERT: 023, 157

Toughness of rigid plastic exterior building products may be determined by use of air cannon impact test; this test more realistically simulates end- use environmental conditions than does other commonly used tests and will provide important information for evaluating product sections and establishing product quality.

ID NO.- EI70X016121 016121

Plastics in construction

BROWNE HC

Monsanto Co, St. Louis, Mo

Civ Eng (NY) v 39 n 8 Aug 1969 p 39-41

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (DOMES AND SHELLS, Plastics), (PLASTICS, Structural), STRUCTURAL DESIGN,

CARD ALERT: 023, 157, 200

Committee on Plastics in ASCE Structural Div is devising classification and coding system for material, and structural design manual; research is directed toward improving reliability of performance, mechanical properties, and developing higher modulus of elasticity and greater resistance to heating.

ID NO.- EI70X010807 010807

Stadium design favors fans

Eng News-Rec v 183 n 9 Aug 28 1969 p 44

DESCRIPTORS: (\*ROOFS, \*Cable Supported), STADIUMS, (BUILDING MATERIALS, Plastics),

CARD ALERT: 023, 024, 157

Design features of cable supported plastic roof of stadium in Cologne, West Germany; cables from central arch will support plastic roof installed over only part of structure of stadium planned for capacity of 80,000 persons; roof will consist of translucent plastic stretched across steel cables supported by steel box beam arch that will split into fork to form legs at each end of stadium.



ID NO.- EI70X008383 008383

Chemical composition and mechanical deformation of sealing compounds, (Der chemische Aufbau und das deformationsmechanische Verhalten von Fugendichtungsmassen)

MICHEL M

Adhaesion n 7 July 1969 p 253-6, 280

DESCRIPTORS: (\*SEALS, \*Materials), (PLASTICS, Mechanical Properties), (SEALS, Performance), (SEALS, Testing), (BUILDING MATERIALS, Sealants),

CARD ALERT: 167, 251

Modern concept of building construction using prefabricated elements in building construction is engendering ever-increasing demand for flexible joint sealing compounds with specific properties; article deals with relationships between chemical composition and mechanical deformation of sealing compounds based on widely varying materials and with practical consequences thereof; it shows that joint sealing compound cannot be critically judged on individual properties alone, such as elasticity, etc, but only on its behavior on whole from practical viewpoint. 4 refs. In German.

ID NO.- EI70X008258 008258

Sealing and bonding in building construction, (Das Dichten und Verbinden im Hochbau)

HINTERWALDNER R

Adhesion n 9 Sept 1969 p 364-5, 368-70

DESCRIPTORS: (\*BUILDING MATERIALS, \*Sealants), (BUILDING MATERIALS, Plastics), (SEALS, Materials),

CARD ALERT: 023, 157, 181, 251

Report on seminar held in West Germany by members of construction-, adhesive-, sealant- and plastics- industries and professional organizations; proceedings include 11 papers related to applications of new auxiliary materials in buildings; specifically, sealants made of polysulfides, polysilicones, and polyurethanes were discussed; preparation of seal materials and testing procedure for sealers; applications of adhesives for metal bonding in steel constructions; concretes and mortars based on epoxy resins and unsaturated polyesters. In German.

ID NO.- EI70X007700 007700

Prefabricated houses made fully or partly of plastics- 1,  
(Fertighaeuser aus und mit Kunststoff)

SCHWABE A; KNAPPKE G; SIPOS A

Institut fuer das Bauen mit Kunststoffen, Darmstadt, West Germany

Kunststoffe-Plastics v 16 n 7 1969 p 261-4

DESCRIPTORS: (\*HOUSES, \*Plastics), (BUILDING MATERIALS, plastics), (BUILDINGS, Prefabricated),

CARD ALERT: 024, 157

Report on construction of various prototype buildings throughout world in last 15 yr; necessity for research and development in field of plastics application on building before starting mass production; requirements for research work; economic evaluation of introduction of new types of houses on market; sketches of 25 houses designed and built of or with plastics in various countries. In German.

ID NO.- EI70X007435 007435

Plastic materials in building construction, (Kunststoffe im Bauwesen)

WOEBCKEN W

Sueddeutsches Kunststoff-Zentrum, Wuerzburg, West Germany

Industrie-Anzeiger v 91 n 17 Feb 25 1969 p 27-33

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), PLASTICS,

CARD ALERT: 023, 157

It is noted that in 1968 26 to 30% of all plastic materials in West Germany were applied in this field; information intended for architects and building engineers is presented, dealing with structure and classification of plastic materials, their mechanical properties and creep strength, processing methods, and properties and quality control of plastic products. In German.

ID NO.- EI70X006290 006290

Bitumen and plastics as materials competing with and complementing each other in construction, (Bitumen und Plaste als sich ergaenzende und miteinander konkurrierende Werkstoffe in der Bautechnik)

GUNDERMANN E

Plaste u Kautschuk v 16 n 8 Aug 1969 p 605-8

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics),

CARD ALERT: 017, 023, 157

Brief survey of rheological properties of both materials and their compatibility when used in mixtures; examples of various formulations containing both composite material in varying concentration and scope of their uses in building construction, highway and similar applications; bitumen/plastic laminates and use of bitumen as sealant or adhesive for lay-out of plastics sheet and film; scope of construction industry where both materials compete with each other; forecast for future development. 38 refs. In German.

ID NO.- EI70X006133 006133

Properties and applications of expanded polystyrene, (Proprieta ed applicazioni del polistirolo espanso)

BROWN WB

Poliplasti e Plastici Rinforzati v 17 n 140 July 1969 p 11-15

DESCRIPTORS: (\*PLASTICS, \*Polystyrene), (BUILDING MATERIALS, Plastics), (PACKING MATERIALS, Plastics),

CARD ALERT: 023, 117, 157

Versatility and range of advantageous properties of this material is shown, and various building and packaging applications described; possible other uses of expanded polystyrene indicated. In Italian.

ID NO.- EI70X004976 004976

Plastic window frame system joins 'Lifeseal' series

Rubber & Plastics Age v 50 n 6 June 1969 p 417

DESCRIPTORS: (\*BUILDING MATERIALS, \*Plastics), (PLASTICS, Vinyl), (WINDOWS, Plastics),

CARD ALERT: 023, 024, 157

Development of PVC window system in Great Britain; frames are hollow extrusions of Hoechst's 'Holstalit' Z PVC with welded miter joints; six basic types of window are available in wide variety of sizes; vertical and horizontal sliding, fixed light, pivot sash, vent lights or fanlights (top or bottom hung) and casements; glazing can be done on site or at factory; glass is retained by snap-in PVC bead, without any need for screws or clips and recess is then sealed with mastic or glazing strip.

ID NO.- EI70X00442 00442

Sixth International Reinforced Plastics Conference, Nov 13- 15 1968,  
by British Plastics Federation, Reinforced Plastics Group, London

Brit Plast Fed, London, Engl, 1968 (recd 2/25/69/, various pagings  
DESCRIPTORS: (\*PLASTICS, \*Reinforced), (CONTAINERS, Plastics), GLASS  
FIBER, (ELECTRIC EQUIPMENT, Materials), (BUILDING MATERIALS, Plastics)

CARD ALERT: 023, 058, 080, 117, 157

Twenty- seven papers were presented at five sessions covering applications, overseas reports, product development and processes, marketing and promotion, research, development and testing; some of specific topics covered included glass fiber reinforced plastics in buildings and cargo containers, glass fiber loops for electrical application, and glass rods, glass fiber fabrics, and wire sheet for reinforcement of plastics; individual papers are abstracted separately.